

# Service Manual

**PIONEER**  
The future of sound and vision.

• KEH-8100B



**ORDER NO.**  
**CRT 1264**

**CASSETTE CAR STEREO WITH FM/MW/LW ELECTRONIC TUNER**

# KEH-8100SDK

**WG**

# KEH-8100B

**EW**

# KEH-8101B

**X1B**

**CASSETTE CAR STEREO WITH FM/AM ELECTRONIC TUNER**

# KEH-8100QR

**US**

# KEH-8150QR

**ES, CA**

# KEH-700QR

**US**

## Note:

- See the service manual KEX-M800 (CRT1234) for the cassette mechanism description.

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## 1. SPECIFICATIONS

### • KEH-8100SDK, KEH-8100B, KEH-8101B

#### General

Power source	14.4 V DC (10.8 — 15.6 V allowable)
Grounding system	Negative type
Max. current consumption	7.5 A
Dimensions (chassis)	178(W) × 50(H) × 150(D) mm
(nose)	188(W) × 58(H) × 13(D) mm
Weight	1.6 kg

#### Amplifier

Maximum power output	25 W × 2/15 W × 4 (EIAJ)
Continuous power output	11 W × 2 (1 % dist. at 1 kHz)
Load impedance	4 Ω (4 — 8 Ω allowable)
Max. output level/output impedance (pre out)	250 mV/1 kΩ
Tone controls (bass)	±10 dB (100 Hz)
(treble)	±10 dB (10 kHz)
Loudness contour	+12 dB (100 Hz), +7 dB (10 kHz) (volume: —30 dB)

#### Tape player

Tape	Compact cassette tape (C-30 — C-90)
Tape speed	4.76 cm/sec. (+0.14 cm/sec., —0.05 cm/sec.)
Fast forward/rewind time	Approx. 100 sec. for C-60
Wow & flutter	0.08% (WRMS)
Frequency response	Metal: 30 — 19,000 Hz (±3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	Metal: Dolby B NR IN: 66 dB (IEC-A network) Dolby NR OUT: 60 dB (IEC-A network)

#### FM tuner

Frequency range	87.5 — 108 MHz
Usable sensitivity	11 dBf (1.0 μV/75 Ω, mono, S/N 30 dB)
50 dB quieting sensitivity	16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IEC-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 — 15,000 Hz (±3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)

#### MW tuner

Frequency range	531 — 1,602 kHz
Usable sensitivity	18 μV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (±9 kHz)

#### LW tuner

Frequency range	153 — 281 kHz
Usable sensitivity	30 μV (30 dB) (S/N: 20 dB)
Selectivity	50 dB (±9 kHz)

#### Note:

Specifications and the design are subject to possible modification without notice due to improvements.

### • KEH-8150QR/ES

#### General

Power source	14.4 V DC (10.8 — 15.6 V allowable)
Grounding system	Negative type
Max. current consumption	7.5 A
Dimensions (chassis)	178(W) × 50(H) × 150(D) mm
(nose)	188(W) × 58(H) × 13(D) mm
Weight	1.6 kg

#### Amplifier

Maximum power output	25 W × 2/15 W × 4 (EIAJ)
Continuous power output	11 W × 2 (1 % dist. at 1 kHz)
Continuous power output is 10 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.	
Load impedance	4 Ω (4 — 8 Ω allowable)
Max. output level/output impedance (pre out)	500 mV/1 kΩ
Tone controls (bass)	±10 dB (100 Hz)
(treble)	±10 dB (10 kHz)
Loudness contour	+12 dB (100 Hz), +7 dB (10 kHz) (volume: —30 dB)

#### Tape player

Tape	Compact cassette tape (C-30 — C-90)
Tape speed	4.76 cm/sec. (+0.14 cm/sec., —0.05 cm/sec.)
Fast forward/rewind time	Approx. 100 sec. for C-60
Wow & flutter	0.08% (WRMS)
Frequency response	Metal: 30 — 19,000 Hz (±3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	Metal: Dolby B NR IN: 66 dB (IEC-A network) Dolby NR OUT: 60 dB (IEC-A network)

#### FM tuner

Frequency range	87.5 — 108 MHz
Usable sensitivity	11 dBf (1.0 μV/75 Ω, mono, S/N 30 dB)
50 dB quieting sensitivity	16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IEC-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 — 15,000 Hz (±3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)

#### AM tuner

Frequency range	531 — 1,602 kHz (9 kHz) 530 — 1,710 kHz (10 kHz)
Usable sensitivity	18 μV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (±9 kHz) 50 dB (±10 kHz)

#### Note:

Specifications and the design are subject to possible modification without notice due to improvements.

## ● KEH-8150QR/CA

### General

Power source	14.4 V DC (10.8 — 15.6 V allowable)
Grounding system	Negative type
Max. current consumption	7.5 A
Dimensions (chassis)	178(W) × 50(H) × 150(D) mm
(nose)	188(W) × 58(H) × 13(D) mm
(mounting bracket)	182(W) × 52(H) × 166(D) mm
Weight	1.5 kg

### Amplifier

Continuous power output is 10 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.	
Maximum power output	25 W × 2/15 W × 4 (EIAJ)
Load impedance	4 Ω (4 — 8 Ω allowable)
Preout output level/impedance	500 mV/1 kΩ
Tone controls (bass)	±10 dB (100 Hz)
(treble)	±10 dB (10 kHz)
Loudness contour	+12 dB (100 Hz), +7 dB (10 kHz) (volume: -30 dB)

### Tape player

Tape	Compact cassette tape (C-30 — C-90)
Tape speed	4.76 cm/sec. (+0.14 cm/sec., -0.05 cm/sec.)
Fast forward/rewind time	Approx. 100 sec. for C-60
Wow & flutter	0.08% (WRMS)
Frequency response	Metal: 30 — 22,000 Hz (±3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	Metal: Dolby C NR IN: 72 dB (IHF-A network) Dolby B NR IN: 66 dB (IHF-A network) Dolby NR OUT: 60 dB (IHF-A network)

### FM tuner

Frequency range	87.9 — 107.9 MHz
Usable sensitivity	11 dBf (1.0 μV/75 Ω, mono, S/N 30 dB)
50 dB quieting sensitivity	16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IHF-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 — 15,000 Hz (±3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)
Selectivity	70 dB (2ACA) (±400 kHz)
Three-signal intermodulation (desire signal level)	50 dBf (two undesire signal level: 110 dBf)

### AM tuner

Frequency range	530 — 1,710 kHz
Usable sensitivity	18 μV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (±10 kHz)

### Note:

Specifications and the design are subject to possible modification without notice due to improvements.

## ● KEH-8100QR, KEH-700QR

### General

Power source	14.4 V DC (10.8 — 15.6 V allowable)
Grounding system	Negative type
Max. current consumption	7.5 A
Dimensions (chassis)	178(W) × 50(H) × 150(D) mm
(nose)	188(W) × 58(H) × 13(D) mm [7(W) × 2(H) × 5-7/8(D) in.]
(mounting bracket)	182(W) × 52(H) × 166(D) mm [7-3/8(W) × 2-1/4(H) × 1/2(D) in.]
Weight	1.6 kg (3.5 lbs.)

### Amplifier

Continuous power output is 10 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.	
Maximum power output	25 W × 2/15 W × 4 (EIAJ)
Load impedance	4 Ω (4 — 8 Ω allowable)
Preout output level/impedance	500 mV/1 kΩ
Tone controls (bass)	±10 dB (100 Hz)
(treble)	±10 dB (10 kHz)
Loudness contour	+12 dB (100 Hz), +7 dB (10 kHz) (volume: -30 dB)

### Tape player (KEH-8100QR)

Tape	Compact cassette tape (C-30 — C-90)
Tape speed	4.76 cm/sec. (+0.14 cm/sec., -0.05 cm/sec.)
Fast forward/rewind time	Approx. 100 sec. for C-60
Wow & flutter	0.08% (WRMS)
Frequency response	Metal: 30 — 19,000 Hz (±3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	Metal: Dolby B NR IN: 66 dB (IEC-A network) Dolby NR OUT: 60 dB (IEC-A network)

### Tape player (KEH-700QR)

Tape	Compact cassette tape (C-30 — C-90)
Tape speed	4.76 cm/sec. (+0.14 cm/sec., -0.05 cm/sec.)
Fast forward/rewind time	Approx. 100 sec. for C-60
Wow & flutter	0.08% (WRMS)
Frequency response	Metal: 30 — 22,000 Hz (±3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	Metal: Dolby C NR IN: 72 dB (IHF-A network) Dolby B NR IN: 66 dB (IHF-A network) Dolby NR OUT: 60 dB (IHF-A network)

### FM tuner

Frequency range	87.9 — 107.9 MHz
Usable sensitivity	11 dBf (1.0 μV/75 Ω, mono, S/N 30 dB)
50 dB quieting sensitivity	16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IHF-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 — 15,000 Hz (±3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)
Selectivity	70 dB (2ACA) (±400 kHz)
Three-signal intermodulation (desire signal level)	50 dBf (two undesire signal level: 110 dBf)

### AM tuner

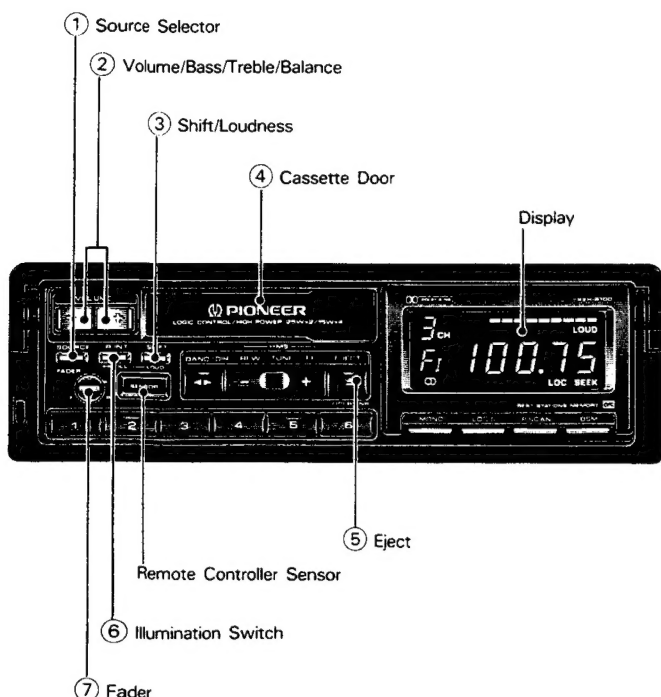
Frequency range	530 — 1,710 kHz
Usable sensitivity	18 μV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (±10 kHz)

These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.

### Note:

Specifications and the design are subject to possible modification without notice due to improvements.

## 2. ADJUSTING VOLUME AND TONE



### Adjusting Volume/Bass/Treble/Balance

To adjust volume, press the button (2). The display changes at each press of the button (3): Volume → Bass → Treble → Balance. Press the button (2) to adjust the displayed mode.

#### Adjusting Volume

Pressing the (+) side of Button (2) increases the volume, while the (-) side decreases it.



#### Adjusting Bass

Pressing the (+) side of Button (2) increases bass, while the (-) side decreases bass.



#### Adjusting Treble

Pressing the (+) side of Button (2) increases treble, while the (-) side decreases treble.



#### Adjusting Balance

Pressing the (-) side of Button (2) shifts the balance to the left speaker, while the (+) side shifts it to the right speaker.



### Switching Power On

#### Radio

Press Button (1) to switch the tuner power on. Press Button (1) again to switch the power off.

#### Tape

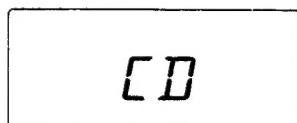
Insert the cassette tape through the Cassette Door (4), and the power will be automatically turned on to get the tape start being played back. To eject the tape, press the button (5).

- You will hear a few consecutive clicks from your unit when you have started the engine with the cassette tape inserted or when you have again mounted your unit on the Quick Release Mounting Bracket following dismounting. The sounds are only the sign of your unit's mechanical preparation being made, but does not indicate at all its functional failure.

### Changing the Source

When the cassette tape is inserted, the source changes at each press of the button (1): Tape → Radio → OFF. When an optionally available CD player, such as a CDX-4, is connected to the unit through the external input terminal, the source changes at each press of Button (1): Tape → Radio → CD Player.

- "CD" appears on the display when the CD player is in operation.



- If a CD player connected to the unit's external input terminal is playing, the unit will not turn off even if Button (1) is pressed. To turn off the unit, stop the disc play before turning off the power.

- When you're adjusting bass, treble or balance settings, the indicator will stop at the center setting. About 5 seconds after adjustment has been made, the display returns to its previous state.



### Adjusting the Fader

In the case of a 4-speaker system, this function controls the balance between the front and rear speakers. Turning Knob (7) to the left shifts the balance to the front speaker, and turning it to the right shifts the balance to the rear speaker. In the case of a 2-speaker system, set the knob at the center position.

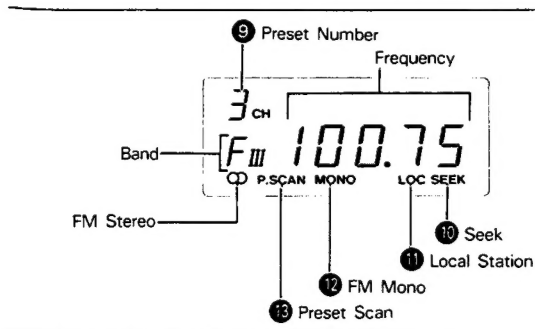
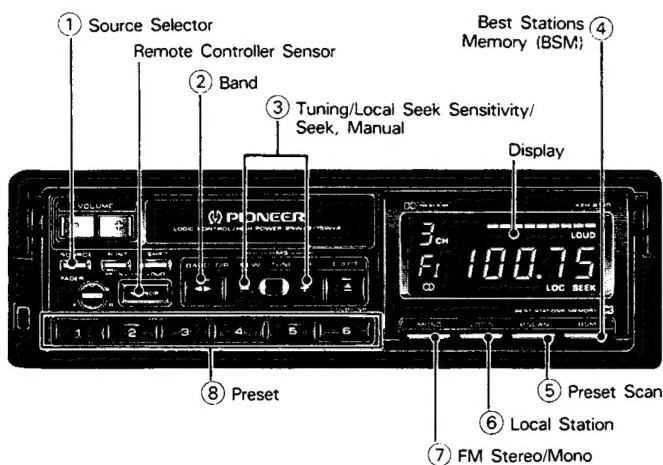
### Using the Loudness Function

Press button (3) for about two seconds and the "LOUD" indication will appear on the display. This loudness function lets you enhance both high and low frequencies to give a more natural sound at low volumes. To cancel this function, press button (3) again for about two seconds.

### Switching Illumination Colour

You can select either green or amber for the switch illumination color. To switch the color, hold down Button (6) for two seconds.

## 3. USING THE RADIO



**1** Press Button (1) to switch the radio power on.

**2** Press Button (2) to select a band.

$F_I \rightarrow F_{II} \rightarrow F_{III} \rightarrow M/L$   
(FM1) (FM2) (FM3) (MW/LW)

Use Button (3) to switch between MW (531–1,602 kHz) and LW (153–281 kHz).

**3** Use seek tuning to tune in a frequency.

Confirm that the SEEK indicator (10) is shown on the display (if not, press the (+) and (–) sides of Button (3) at the same time). Press the (+) side of Button (3) to automatically tune in the next higher receivable frequency, and the (–) side for a lower frequency.

**4** Adjust volume and tone (see page 4).

**5** Assign the tuned frequency to one of the buttons in Bank (8) (preset memory).

Press and hold down one of the buttons in Bank (8) for at least two seconds. The frequency is assigned to the selected button when the preset number (9) stops flashing on the display. Up to 18 FM stations (6 each for FM1, FM2 and FM3), and six MW/LW stations can be assigned to the preset memory buttons in Bank (8).

**6** Once a frequency is assigned to a button in Bank (8), you just need to press that button to tune it in.

This also causes the number of the button pressed to appear at Position (9) on the display.

## Preset Scan Tuning

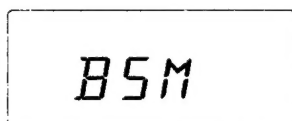
This function lets you automatically monitor the stations assigned to the preset buttons.

1. Press the button (5), and "P.SCAN" (13) will light up and the preset number (9) flash.  
Each station assigned to the buttons in Bank (8) will be automatically tuned in for about eight seconds.
2. When you hear a station that you like, press Button (5) again to cancel preset scan tuning and remain at that station.

## BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the buttons in Bank (8), from strongest to weakest. It comes in handy when trying to find local stations while driving.

1. Press Button (2) and select a band.
2. Hold down Button (4). After about two seconds, a "beep" will sound to signal that the BSM search has started. At this time, "BSM" will flash on the display.



3. The frequency display will return once BSM search is complete, and frequencies are assigned to buttons 1 through 6 in Bank (8).
- At the end of the BSM search, the displayed frequency is that assigned to Button (1) of Bank (8).
  - If there are fewer than six strong stations in the area, some of the buttons in Bank (8) will not be assigned frequencies, so they will retain any frequencies assigned to them previously.
  - BSM search may take as long as 30 seconds in areas where there are few strong stations.
  - You can cancel BSM search by pressing Button (2).

## Manual Tuning

Use manual tuning when stations are too weak to be picked up by seek tuning.

1. Press both (+) and (-) sides of Button (3) at the same time to clear "SEEK" (10).
2. Each press of the (+) side of Button (3) increases the frequency in 50 kHz steps in the FM band, 9 kHz in the MW band and 1 kHz in the LW band. Pressing the (-) side of Button (3) decreases the frequency. Holding down either side of Button (3) changes the frequency at high speed.

## Switching between FM Stereo and Mono

Generally, it is best to allow the ARC (Automatic Reception Control) function to automatically set the optimum listening conditions. When there is a large amount of noise, you can press Button (7) for clearer mono reception ("MONO" (12) will appear on the display).

## Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations. The local setting also has four seek tuning sensitivity levels for FM and two levels for MW/LW to match local conditions.

## Changing the Local Seek Sensitivity

1. Use Button (2) to select a band.
2. Hold down the button (6) for more than two seconds, and the display will show you the current local seek sensitivity for about five seconds.



(Example: LOC-2)

3. While the local seek sensitivity remains on the display, press the (+) side of Button (3) to increase the sensitivity level, and the (-) side to decrease the level as shown below.  
FM : LOC-1 → LOC-2 → LOC-3 → LOC-4  
MW/LW: LOC-1 → LOC-2  
The LOC-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.
- The display of local seek sensitivity returns to the frequency when about five seconds have elapsed after the change of sensitivity.

## Switching between Local and DX

Press Button (6) to switch between Local and DX (distant) seek tuning.

When "LOC" (11) is shown on the display, seek tuning is performed with the local seek sensitivity. Otherwise, seek tuning is performed with the DX seek sensitivity.

### • Note on LW Band Seek Tuning

The following shows changes in LW BAND broadcast frequency steps enacted by WARC/1979. The underlined italic figures indicate changes.

#### A. Up to January 1986

155-164-173-182-191-200-209-218-227-236-245-254-263-272-281

#### B. From February 1986

153-162-171-180-189-200-209-218-227-236-245-254-263-272-281

#### C. From February 1988

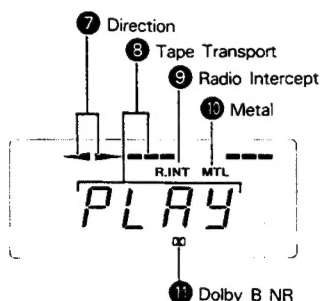
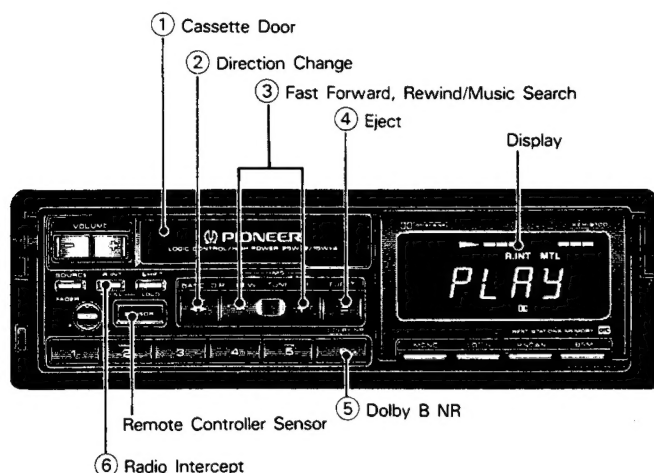
153-162-171-180-189-198-207-216-225-234-245-254-263-272-281

#### D. From February 1990

153-162-171-180-189-198-207-216-225-234-243-252-261-270-279

The LW BAND SEEK operations of this unit are performed in 9 kHz steps starting from 153 kHz. In the case of C, the first ten frequencies are identical to each station being broadcasted, while the remaining five are shifted (2 kHz each). Consequently, manual tuning (in 1 kHz steps) and seek tuning should be used together to tune in the desired LW broadcast. It is also suggested that your favorite LW stations will be memorized for instant recall.

## 4. USING THE TAPE DECK



**1** Insert the cassette tape into the slot **①**, and power will be turned on and the tape begin being played back.

At this time, the tape running indicator **⑧** and the tape running direction indicator **⑦** will light up.

**2** Adjust volume and tone (see page 4).

**3** To eject the cassette tape, press the button **④**.

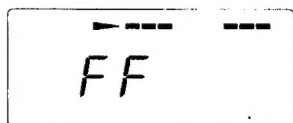
- Power is automatically turned off when the cassette tape has not been set within a few seconds. When this happens, remove the tape by pressing the button **④** because of a possible trouble with the tape.
- A loose or warped label on a cassette tape may interfere with the eject mechanism of the unit or cause the cassette to become jammed in the unit. Avoid using such tapes or remove such labels from the cassette before attempting use.

### Changing Program

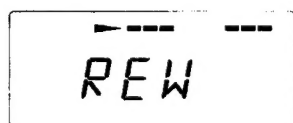
Press the button **②** to change the side of tape from A to B or vice versa.

### Using Fast Forward and Rewind

1. To forward tape fast, press the (+) side of the button **③**.



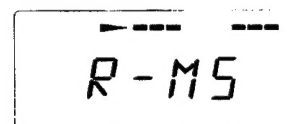
To rewind tape, press the (-) side.



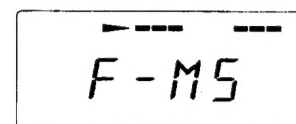
2. To release the Fast Forward or Rewind function, press the button **②**.

### Using Music Search

1. To repeat the current selection (A), press the (-) side of the button **③** two consecutive times.



To hear the following piece of music (B) rather than continue the current selection, press the (+) side of the button **③** two consecutive times. Pressing the button **③** three consecutive times makes the normal sequence of playing resume.



2. To release the Music Search function, press the button **②**.

### Dolby B NR

To hear a tape recorded using a Dolby NR system, press the button **⑤**. ("DO" **⑪** appears).

### Auto Tape Selector

When a cassette tape is inserted, the automatic tape selector determines the tape type, and switches between 70  $\mu$ s and 120  $\mu$ s equalization. When it is a metal or chrome tape, "MTL" **⑩** comes on. When it is a normal tape, nothing comes on.

### Using Radio Intercept

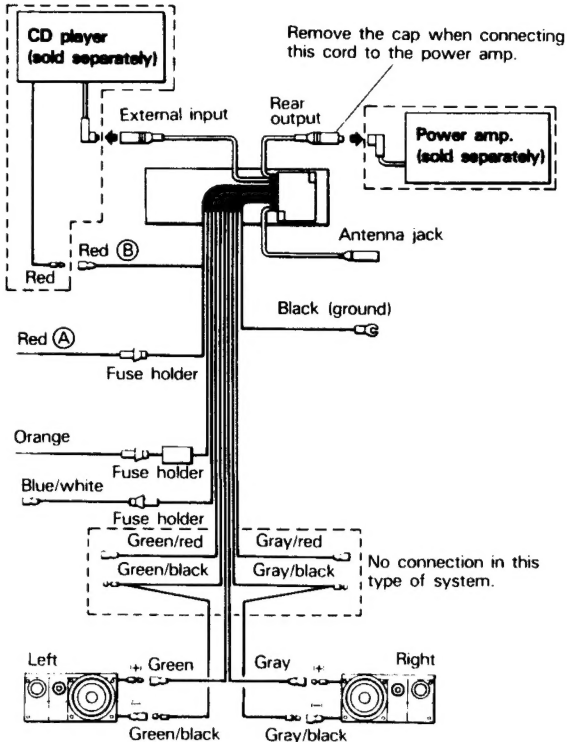
Use Radio Intercept to hear radio while Fast Forward or Rewinding.

1. Press the button **⑥** ("R.INT" **⑨** appears) before Fast Forward or Rewinding, and you will hear radio.
  2. To release the Radio Intercept function, press the button **⑥** again.
- The Radio Intercept does not function when the Music Search is in operation.

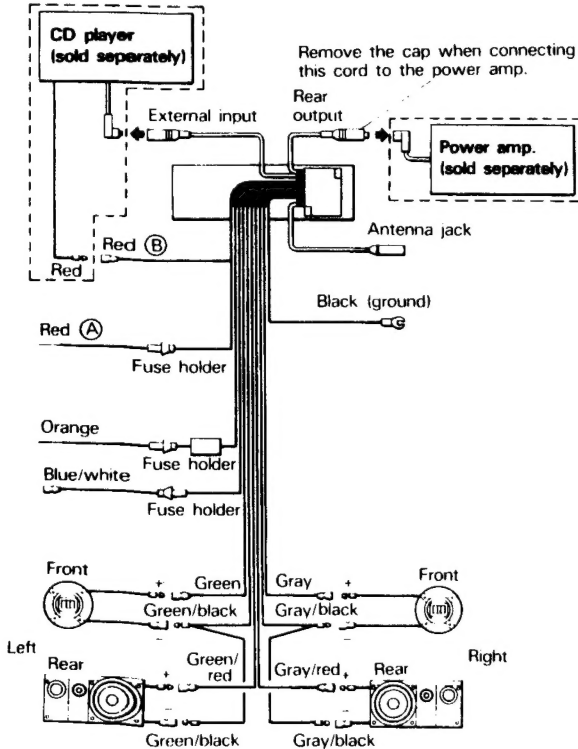
## 5. CONNECTIONS

<b>Blue/white</b>	To auto-antenna power terminal (Max. 300 mA 12 V DC).
<b>Orange</b>	To terminal always supplied with power regardless of ignition switch position.
<b>Red (A)</b>	To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
<b>Red (B)</b>	To red lead (for accessory power supply) of CD player. Remove the cap when connecting this cord to the CD player.
<b>Black (ground)</b>	To vehicle (metal) body.

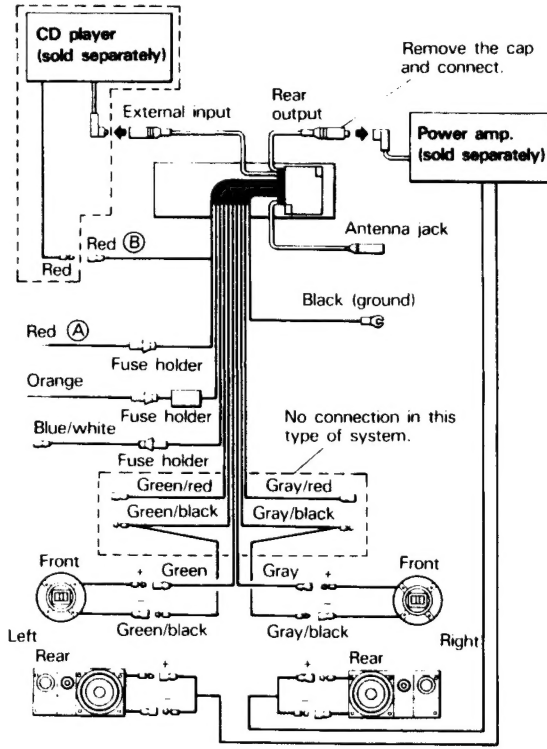
## 2-speaker system



### 4-speaker system 1



## 4-speaker system 2



## 6. DISASSEMBLY

### • Removing the Quick Release Handle Assy

1. Remove the two screws, and then remove the quick release handle assy.

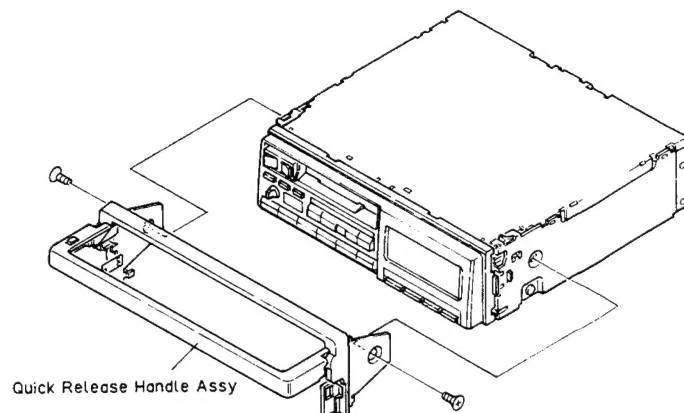


Fig. 1

### • Removing the Case

1. Insert and turn a flat screwdriver to remove the case.
2. Raise the case to remove.

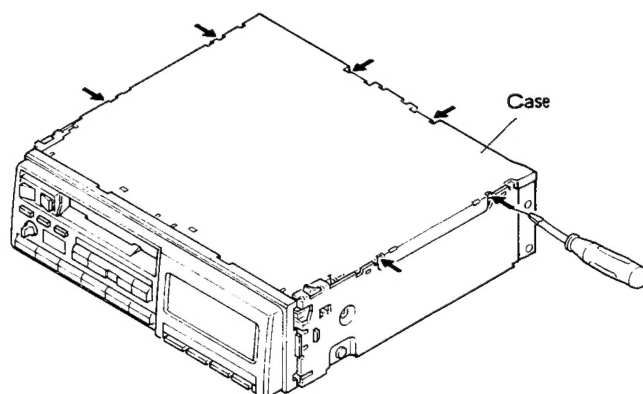


Fig. 2

### • Removing the Cassette Mechanism Assy

1. Remove the four screws.
2. Disconnect the mechanism control unit connector.
3. Remove the cassette mechanism assy.

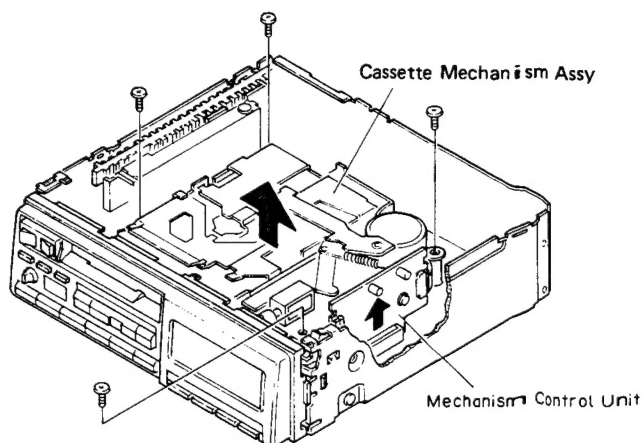


Fig. 3

### • Removing the Grille Assy

1. Removing the knob.
2. Disconnect the two connectors.
3. Press the tabs at three locations, and then pull out the grille assy.

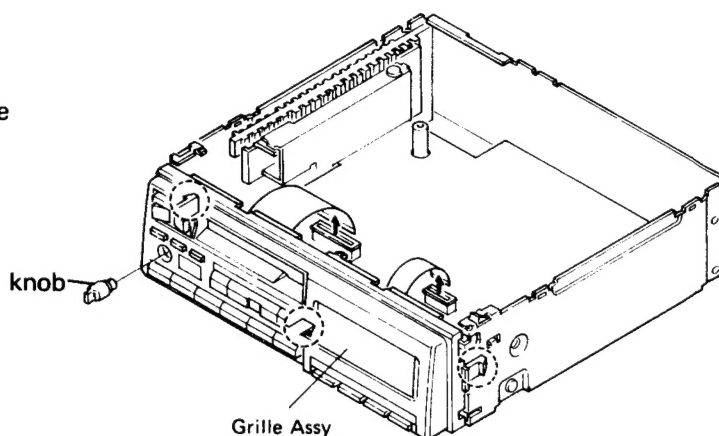


Fig. 4

### • Removing the Key Board Unit

1. Removing the four screws.
2. Press the tabs at four locations indicated by arrows, and then pull out the key board unit.

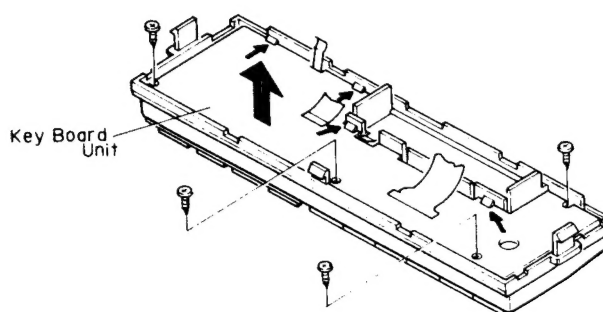


Fig. 5

### • Removing the Tuner Amp Unit

1. Remove the two screws A, and then remove the cord assy.
2. Remove the battery case, and then remove the battery holder.
3. Remove the five screws.
4. Unbend the tabs at two locations indicated by arrows until straight.
5. Disconnect the connector.
6. Raise up on tuner amp unit to remove it from chassis unit.

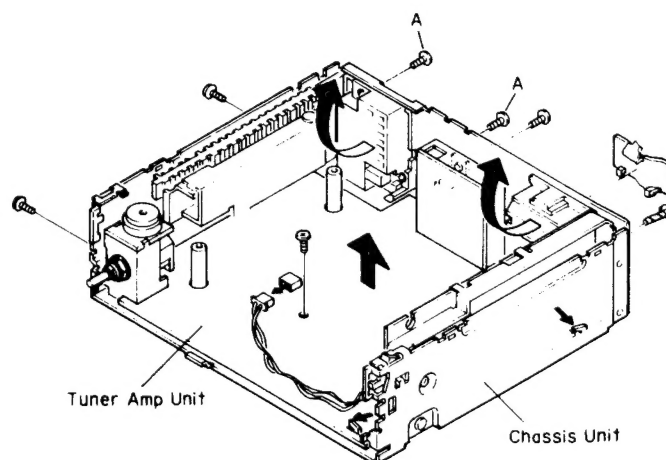


Fig. 6



## 7. BLOCK DIAGRAM

• KEH-8100B

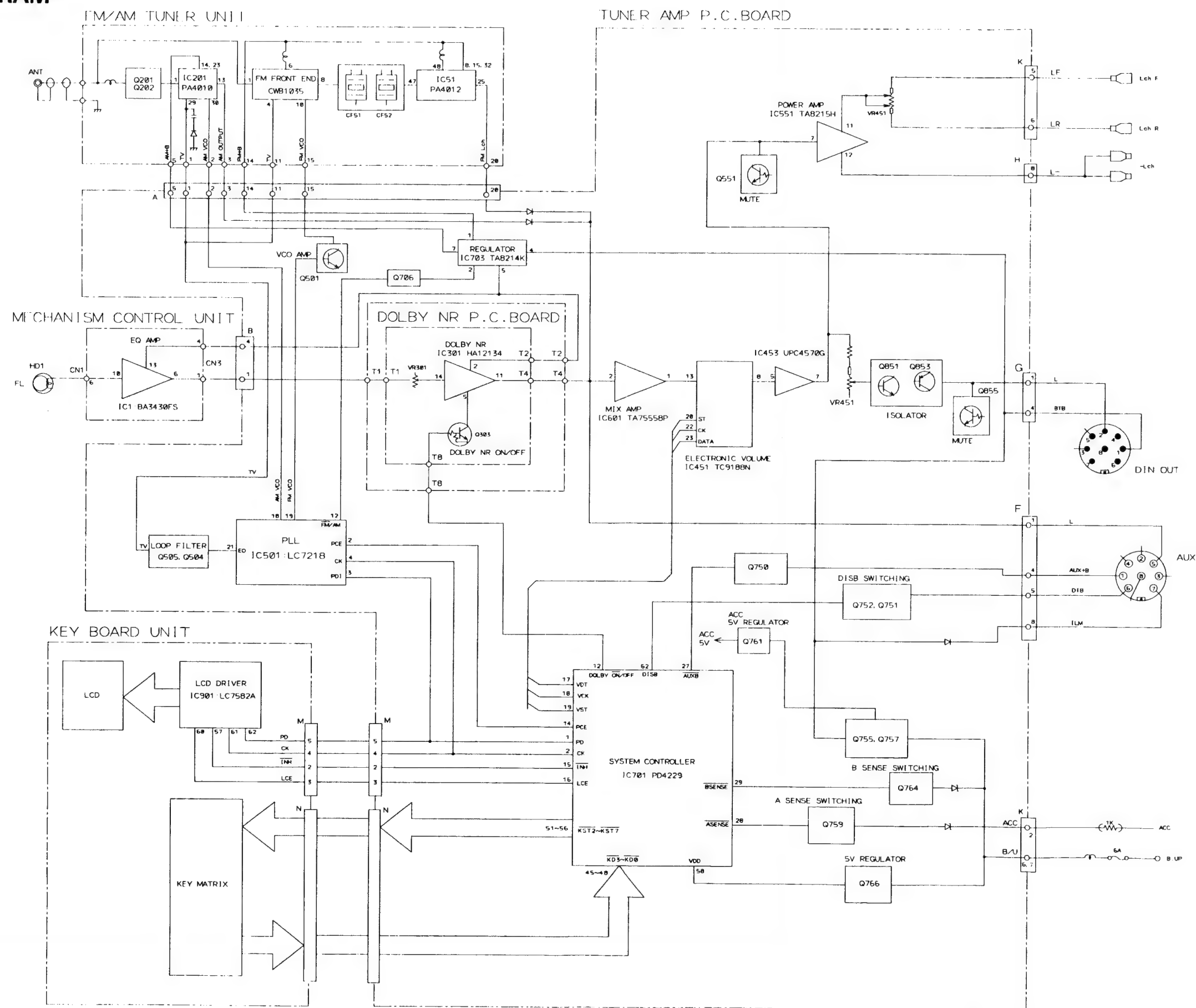


Fig. 7

## 8. ADJUSTMENT

## NOTICE:

Select C1 so that total capacity of 80pF is attained from the direction of the receiver jack.

Z: Output impedance of SSG.

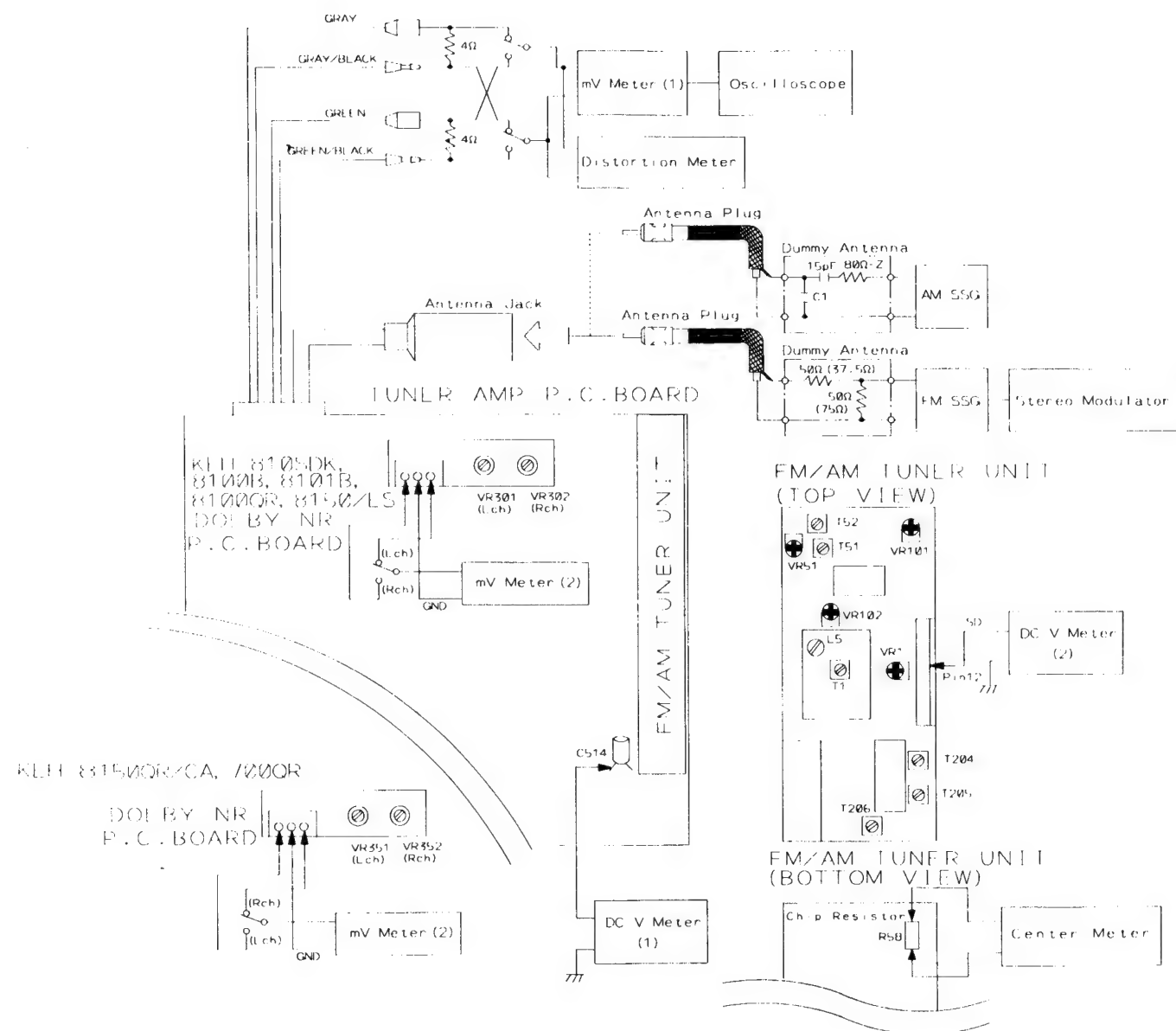


Fig. 8

## MW/LW ADJUSTMENT (KEH-8100SDK, 8100B, 8101B)

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dBμV)			
Tuning Volt	1	(MW MODE)		1,602	—	Verify that DC V Meter (1) is less than 6.5V.
	2	(LW MODE)		153	—	Verify that DC V Meter (1) is more than 2.0V.
IF	1	999	20-25	999	T204, 205, 206	mV Meter (1): Maximum

## AM ADJUSTMENT (KEH-8100QR, 8150QR, 700QR)

\*: ES model when tuning step at 9kHz.

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dBμV)			
Tuning Volt	1			1,710 *(1,602)	—	Verify that DC V Meter (1) is less than 6.5V.
	2			530 *(531)	—	Verify that DC V Meter (1) is more than 2.0V.
IF	1	1,000 *(999)	20-25	1,000 *(999)	T204, 205, 206	mV Meter (1): Maximum

## DOLBY NR ADJUSTMENT

(KEH-8100SDK, 8100B, 8101B, 8100QR, 8150/ES)

No.	Cassette Tape	Adjusting Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz, 200nwb/m)	VR301 (Lch) VR302 (Rch)	mV Meter (2): -7.2dBs (337mV) (DOLBY NR Switch: OFF) (METAL Switch: OFF)

DOLBY NR ADJUSTMENT  
(KEH-8150QR/CA, 700QR)

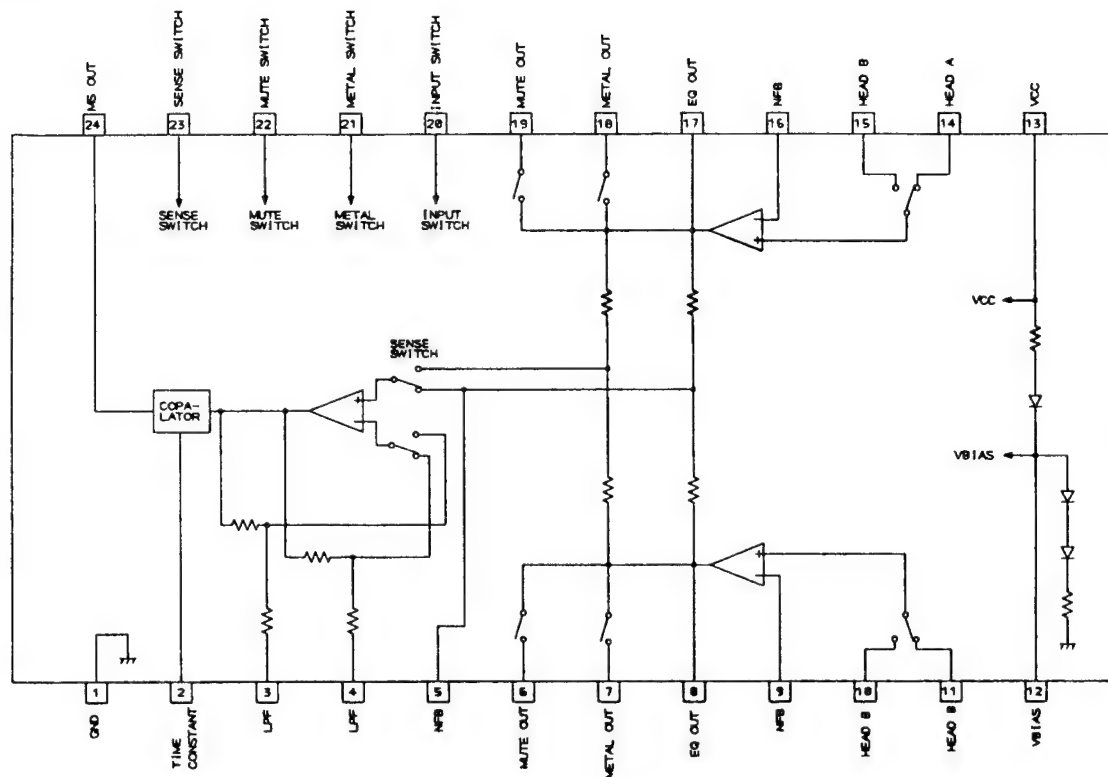
No.	Cassette Tape	Adjusting Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz, 200nwb/m)	VR351 (Lch) VR352 (Rch)	mV Meter (2): -10dBs +1.5, -0.5 (DOLBY NR Switch: OFF) (METAL Switch: OFF)

FM ADJUSTMENT    ※ Stereo MOD.: 1kHz, L+R=90%, Pilot=10%  
\*: US and CA model

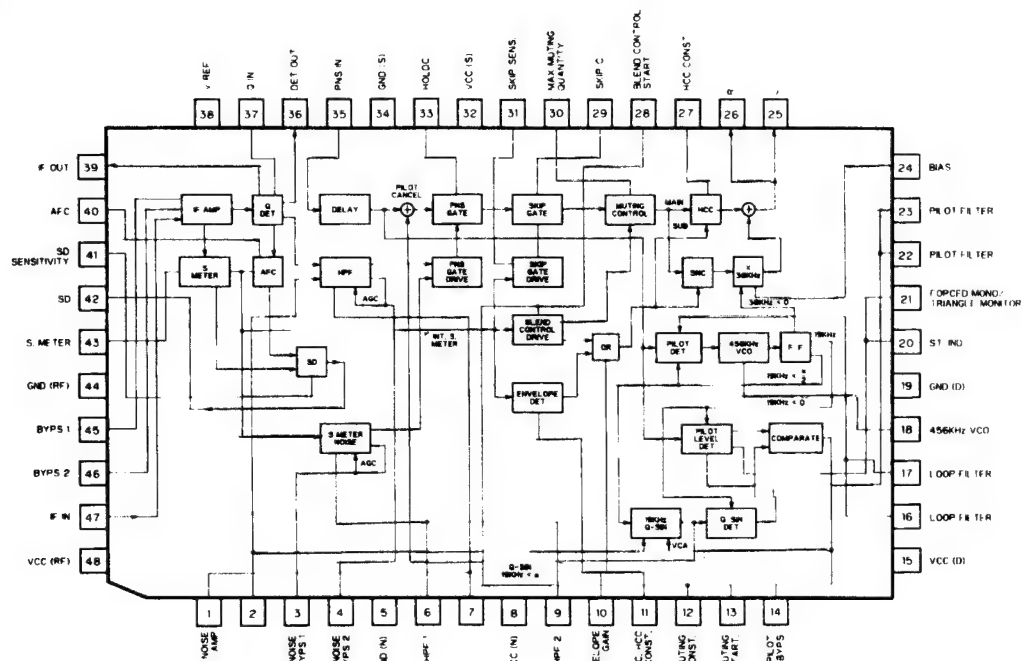
	No.	FM SSG (400Hz, 100%)		Displayed Frequency (MHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level (dB $\mu$ V)			
IF	1	98.1	60	98.1	T51	Center Meter: 0
	2	98.1	60	98.1	T52	Distortion Meter: Minimum
	3	Repeat No. 1-2 alternately so that the center meter indicates the 0 output and distortion meter indicates minimum output.				
Front End	1			108.0 *(107.9)	L5	DC V Meter (1): $6.2 \pm 0.2V$
	2			87.5 *(87.9)	—	Verify that DC V Meter (1) is more than $2.1 \pm 0.6V$
	3	98.1	8	98.1	T1	Distortion Meter: Minimum
Soft Mute	1	98.1	60	98.1	—	mV Meter (1): A dB
	2	98.1	10	98.1	VR102	mV Meter (1): A-3dB
ARC	1	98.1※	35	98.1	VR101	mV Meter (1): Separation 5dB
SD	1	98.1	17	98.1	VR51	DC V Meter (2): Approx. 5V
	2	98.1	16	98.1	—	Verify that DC V Meter (2) is approx. 0V.
	3	98.1	55	98.1	VR1	DC V Meter (2): Approx. 5V
	4	98.1	54	98.1	—	Verify that DC V Meter (2) is approx. 0V.

• ICs

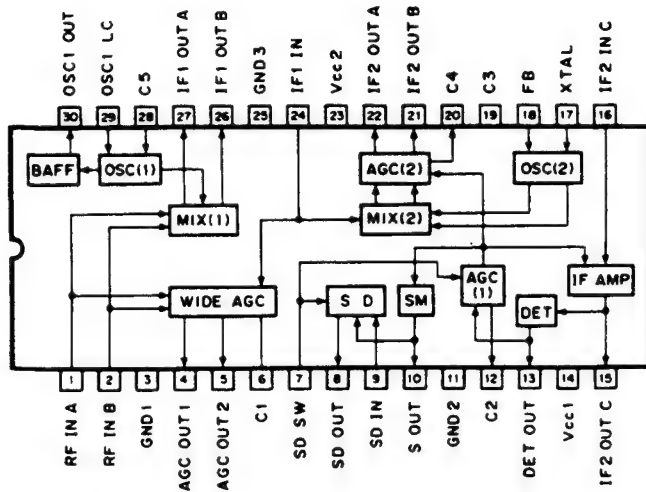
IC1:BA3430FS



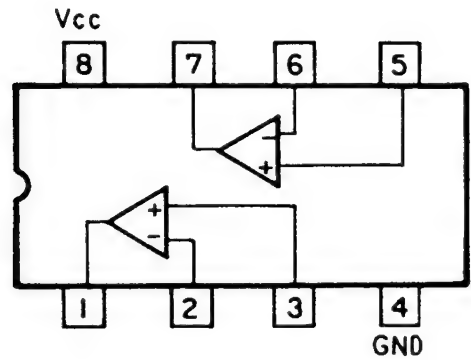
IC51:PA4012



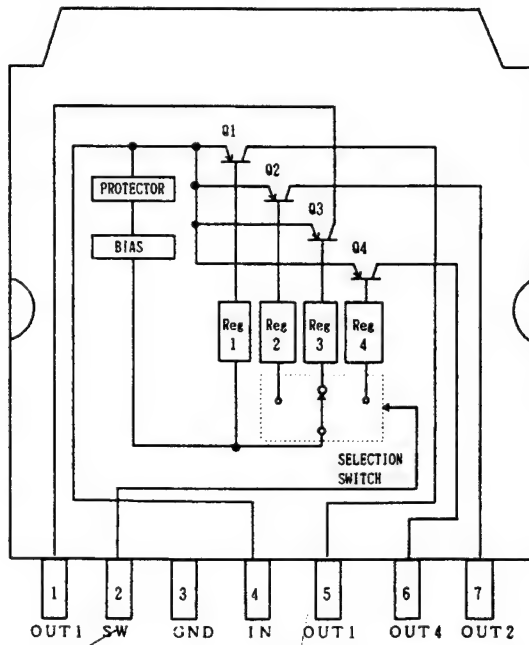
IC201:PA4010



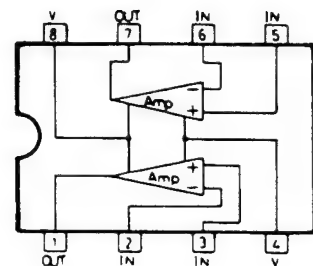
IC452~454:UPC4570G



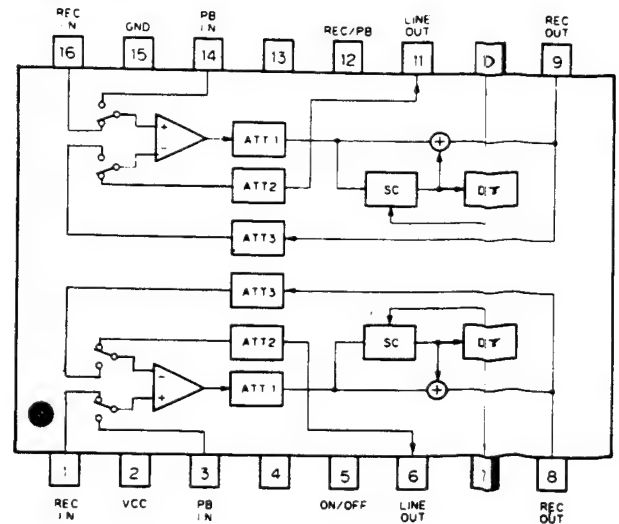
IC703:TA8214K



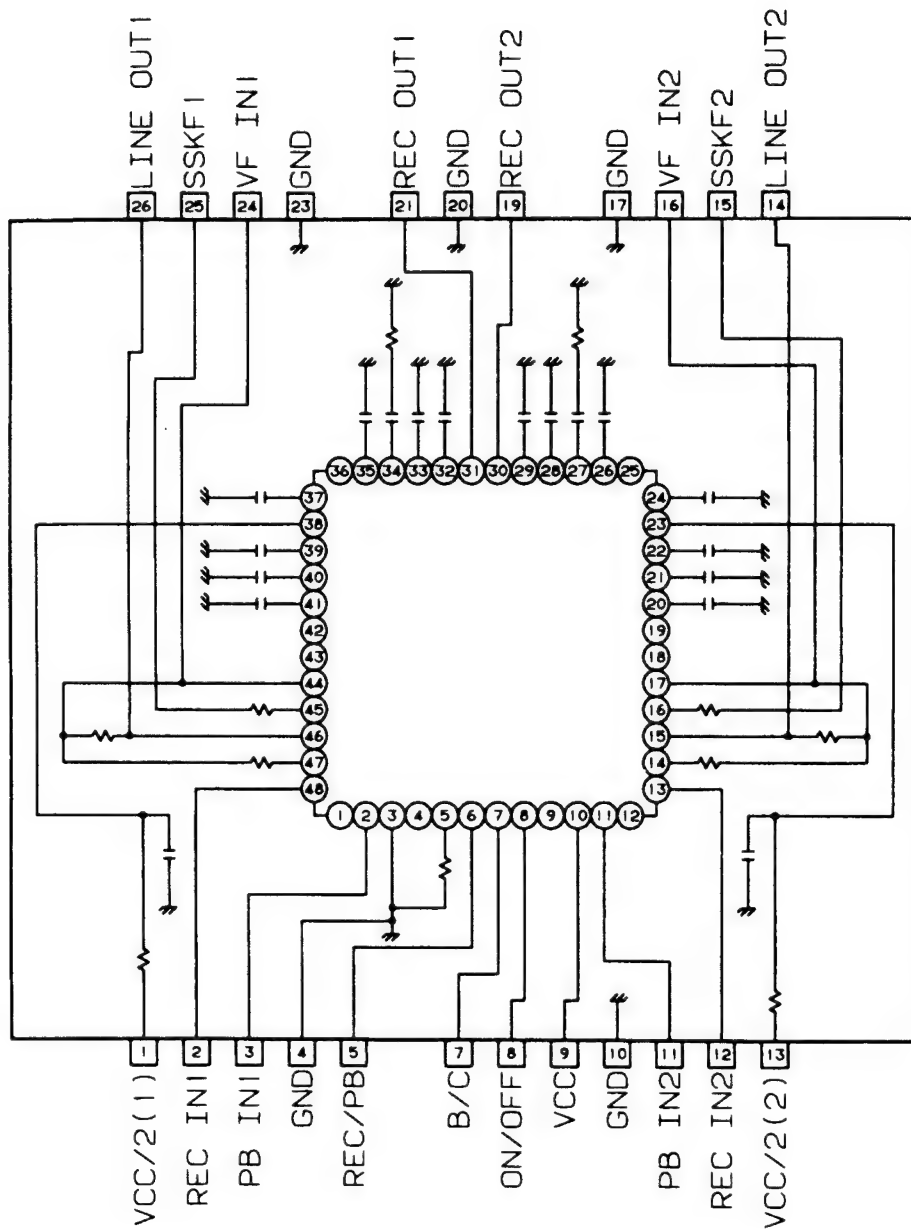
IC601:TA75558P



IC301:HA12134

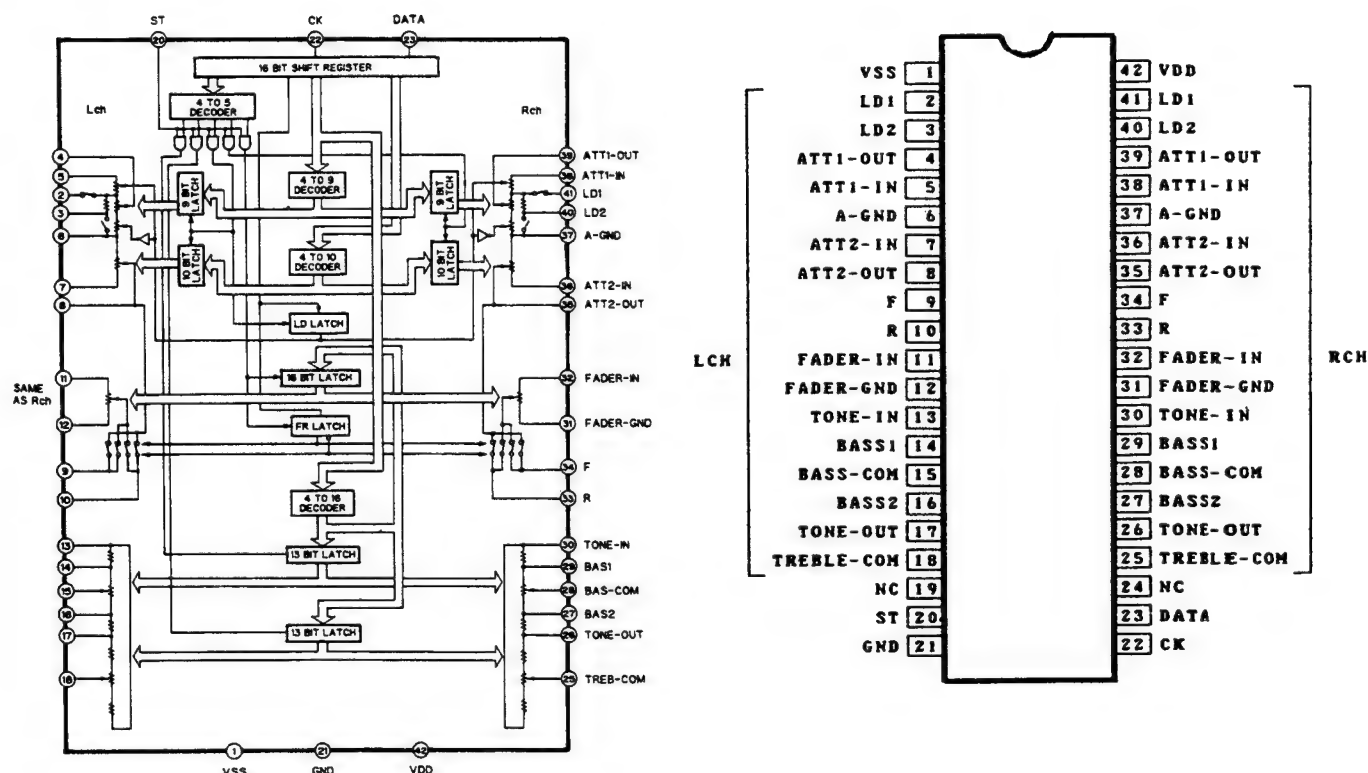


IC351 : BH-2405





IC451 : TC9188N

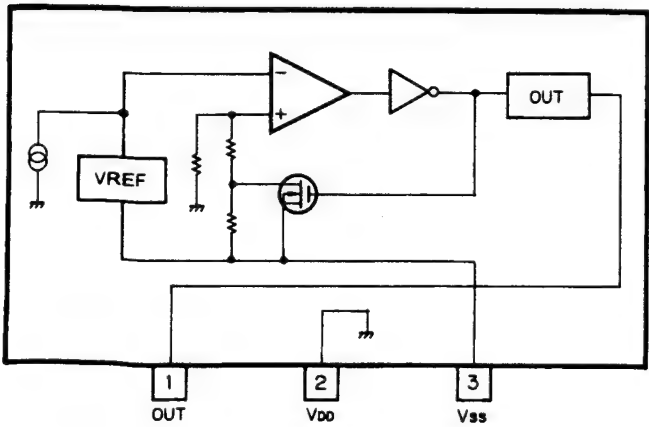


### ● Pin Functions (TC9188N)

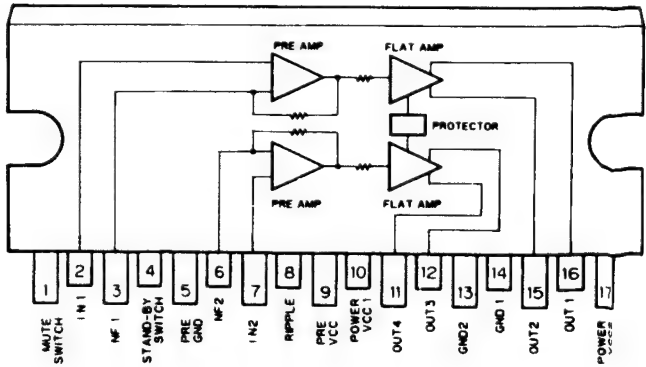
Pin No.	Pin Name	I/O	Function and Operation
2	(L)		Loudness network connection terminals.
3	(R)		
40	LD1, LD2		
41	(R)		
4	(L) ATT1-OUT	Output	10dB step attenuator output terminals. The signal applied to ATT1-IN will be attenuated at eight levels from 0 to -70dB, in 10dB steps.
39	(R) ATT1-OUT		
5	(L) ATT1-IN	Input	10dB step attenuator input terminals.
38	(R) ATT1-IN		
6	(L) A-GND		Analog GND terminals.
37	(R) A-GND		
7	(L) ATT2-IN	Input	1dB step attenuator input terminals.
36	(R) ATT2-IN		
8	(L) ATT2-OUT	Output	1dB step attenuator output terminals. The signal applied to ATT2-IN will be attenuated at ten levels from 0 to -9dB, in 1dB steps.
35	(R) ATT2-OUT		
9	(L) F	Output	Fader control: front output terminals.
34	(R) F		
10	(L) R	Output	Fader control: rear output terminals.
33	(R) R		
11	(L) FADER-IN	Input	Fader control input terminals.
32	(R) FADER-IN		

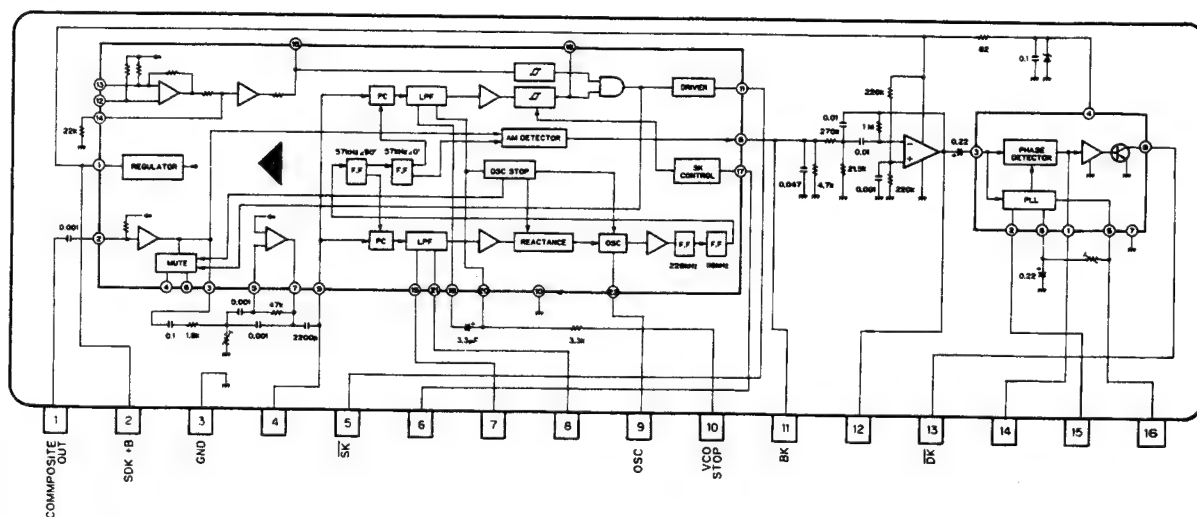
Pin No.	Pin Name	I/O	Function and Operation
12 31	(L) FADER—GND (R)		Attenuator GND terminals for fader control.
13 30	(L) TONE—IN (R)	Input	Tone control input terminals.
14 29	(L) BASS 1 (R)		Tap terminals for bass tone control.
15 28	(L) BASS—COM (R)		Common terminals for bass tone control volume.
16 27	(L) BASS 2 (R)		Tap terminals for bass tone control.
17 26	(L) TONE—OUT (R)	Output	Tone control output terminals.
18 25	(L) TREBLE—COM (R)		Common terminals for treble tone control volume.
19 24	NC NC		Use Open or GND.
20	ST	Input	Strobing input terminal to switch over to the obtained control data. This is a low threshold inverter input, the same as the CK and DATA inputs.
22	CK	Input	Clock input terminal to read control data.
23	DATA	Input	Input terminal for control data.
1 21 42	VSS GND VDD		Power supply terminals.

IC702 : S-8053ANO

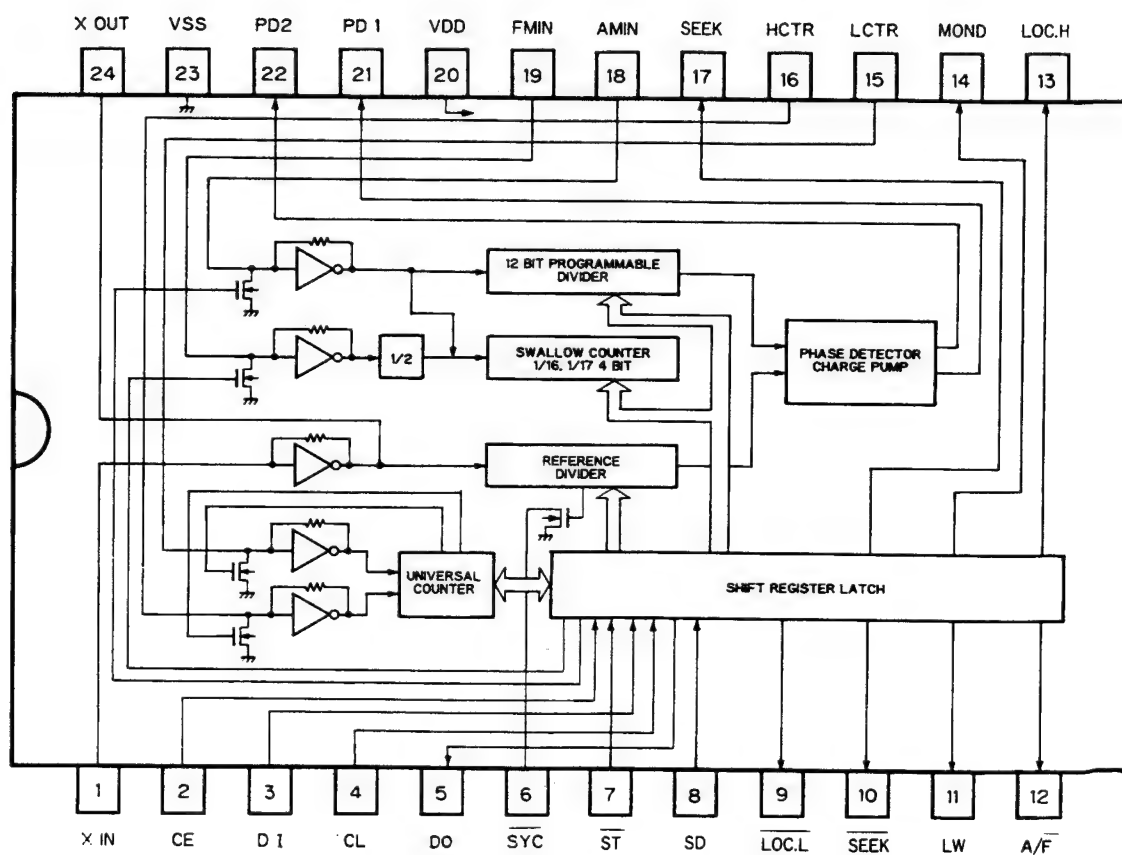


IC551 : TA8215H

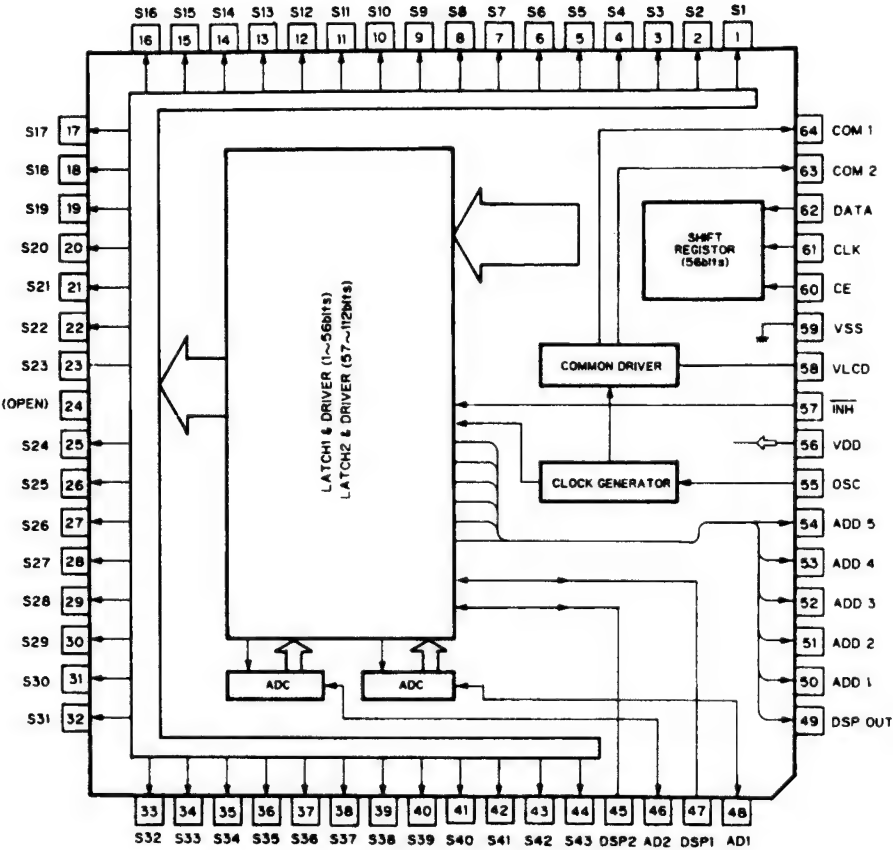




IC501:LC7218

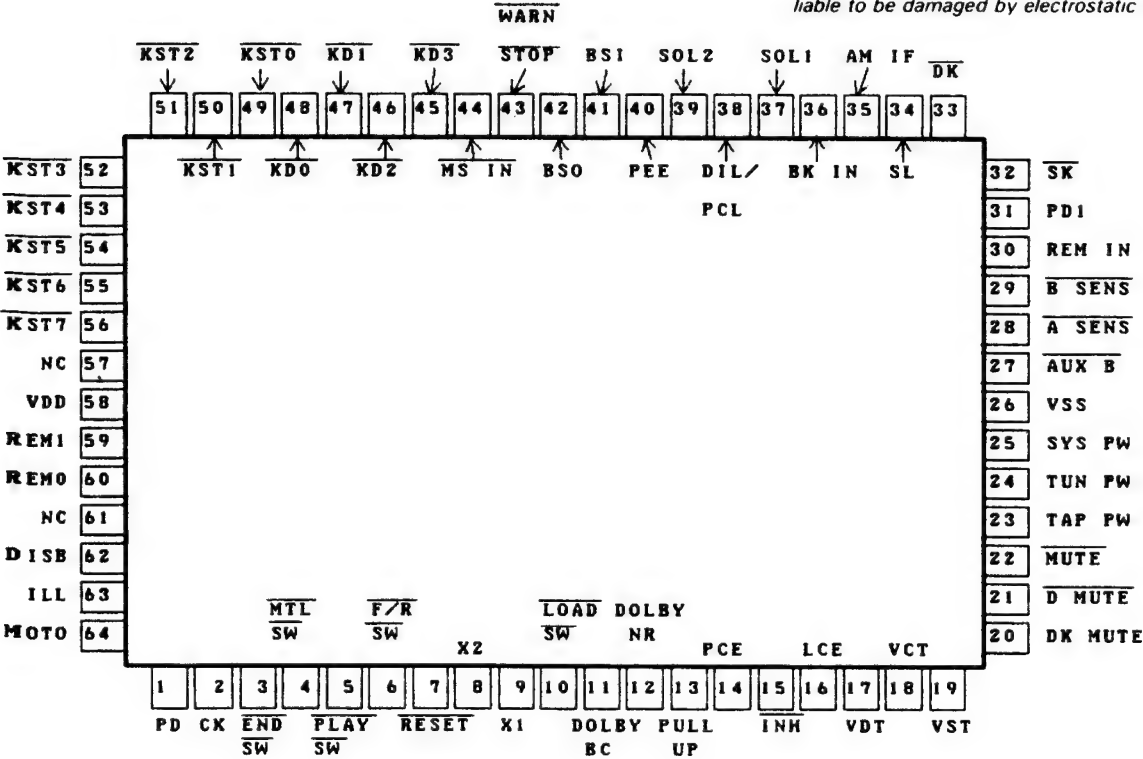


IC901:LC7582A



IC701 : \*PD4229

IC's marked by \* are MOS type.  
Be careful in handling them because they are very liable to be damaged by electrostatic induction.



● Pin Functions (PD4229)

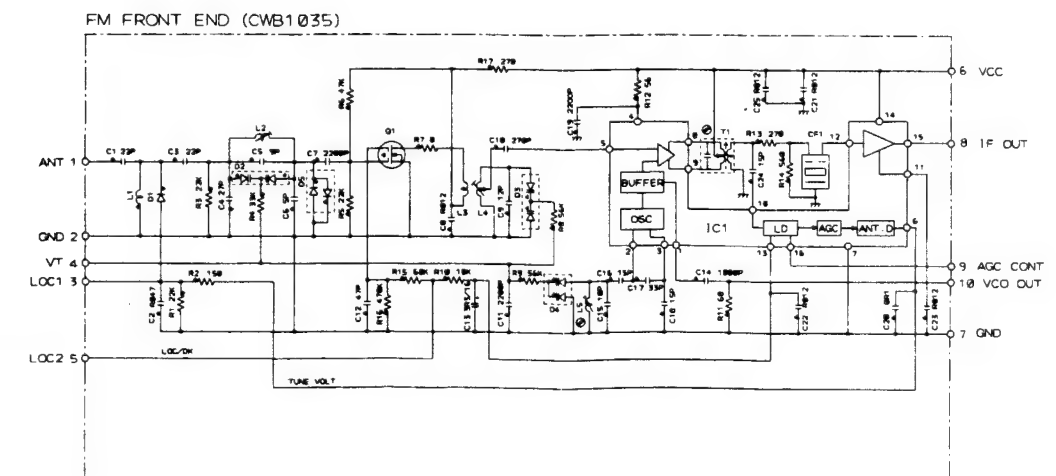
Pin No.	Pin Name	I/O	Output Format	Function and Operation	STBY	RST
1	PD	Output	C	LCD driver IC and PLL IC data line	L	Hi-Z
2	CK	Output	C	LCD driver IC and PLL IC clock line	L	Hi-Z
3	END SW	Input		Deck END sensor input		
4	MTL SW	Input		Deck METAL (70 $\mu$ S) sensor input		
5	PLAY SW	Input		Deck head position (PLAY) sensor input		
6	F/R SW	Input		Deck FWD/REV sensor input		
7	RESET	Input		Reset input		
8	X2			Crystal oscillating element connection pin		
9	X1			Crystal oscillating element connection pin		
10	LOAD SW	Input		Deck LOAD/EJECT sensor input		
11	DOLBYB/C	Output	C	Dolby NR B/C selector output	L	Hi-Z
12	NR	Output	C	Dolby NR ON/OFF output	L	Hi-Z
13	PULL UP	Output	C	Cut pull up for deck switches when BACK UP is OFF	Hi-Z	
14	PCE	Output	C	Chip enable output for PLL IC (IC501:LC7218)	L	Hi-Z
15	INH	Output	C	INH control output for LCD driver IC (IC901:LC7582A)	L	Hi-Z
16	LCE	Output	C	Chip enable or strobe output for LCD driver IC	L	Hi-Z
17	VDI	Output	C	Data output for electronic volume IC (IC451:TC9188N)	L	Hi-Z
18	VCK	Output	C	Clock output for electronic volume IC (IC451:TC9188N)	L	Hi-Z
19	VST	Output	C	Strobe output for electronic volume IC (IC451:TC9188N)	L	Hi-Z
20	DK MUTE	Output	C	Tuner mute output	H	Hi-Z
21	D MUTE	Output	C	Deck mute output	H	Hi-Z
22	MUTE	Output	C	System mute output	H	Hi-Z
23	TAP PW	Output	C	Deck power supply control	L	Hi-Z
24	TUN PW	Output	C	Tuner power supply control	L	Hi-Z
25	SYS PW	Output	C	System (power amp) power supply control	L	Hi-Z
26	VSS			GND		
27	AUX B	Input		AUX B sensor input		
28	A SENS	Input		ACC power supply sensor input		
29	B SENS	Input		BACK UP power supply sensor input		
30	REM IN	Input		Remote control pulse input		
31	PDI	Input		Data input for PLL IC (IC501:LC7218)	L	Hi-Z
32	SK	Input		SK signal input		
33	DK	Input		DK signal input		
34	SL	Input		Input level sensor input		
35	AM IF	Input		AM IF count input		
36	BK IN			Not used		
37	SOL 1	Output	C	Output for deck solenoid 1 (head position)	L	Hi-Z
38	DIL/PCL	Output	C	Deck FWD/REV head selector output	Keep	Hi-Z
39	SOL 2	Output	C	Output for deck solenoid 2 (DIR selector and EJECT)	L	Hi-Z
40	PEE	Output	C	Beep tone output	L	Hi-Z

Pin No.	Pin Name	I/O	Output Format	Function and Operation	STBY	RST
41	BSI	Input		Bus serial data input		
42	BSO	Output	C	Bus serial data output		
43	WARNSTOP	Input		Quick release warning stop input		
44	MS IN	Input		Music signal input		
45-48	KD3-KD0	Input		Key return input		
49	KST0	Output	NM	Model sense strobe output	Hi-Z	Hi-Z
50	KST1	Output	NM	Model sense strobe output	Hi-Z	Hi-Z
51-56	KST2-KST7	Output	NM	Key strobe output		
57	NC					
58	VDD					
59	REM1	Output	C	AUX remote control data output 1		
60	REM0	Output	C	AUX remote control data output 2		
61	NC					
62	DISB	Output	C	DISB control output	L	Hi-Z
63	ILL	Output	C	Illumination green/amber selector output	Keep	Hi-Z
64	MOTO	Output	C	Deck main motor control output	L	Hi-Z

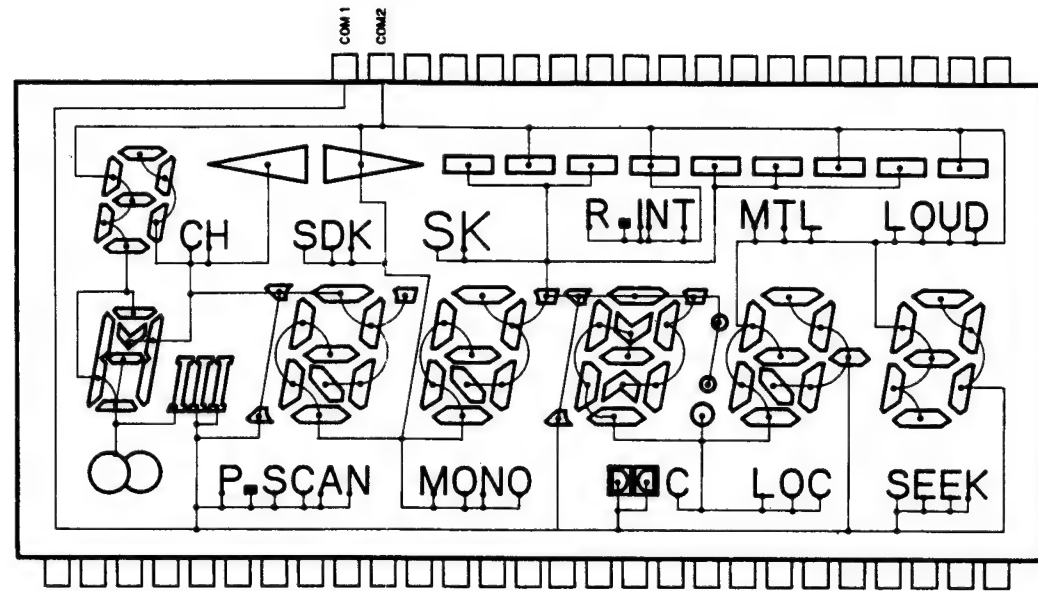
Output Format	Meaning
C	CMOS Output
NM	Neutral resistivity N channel open drain

● FM FRONT END

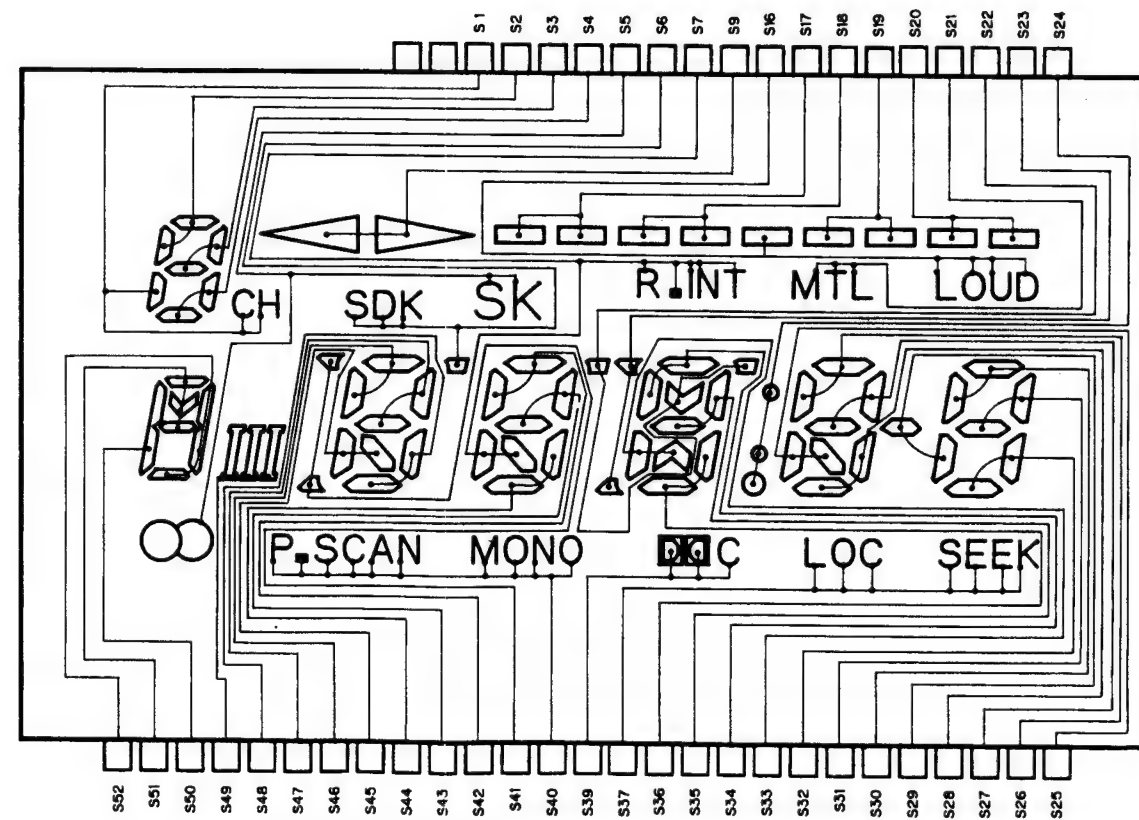
NOTE  
 Chip Resistor  
 Chip Capacitor  
 Chip Diode  
 Chip Transistor  
 Decimal points for resistor and capacitor fixed values are expressed as  
 2.2-2R2  
 0.022-0022



• LCD (CAW1070)  
COMMON



SEGMENT



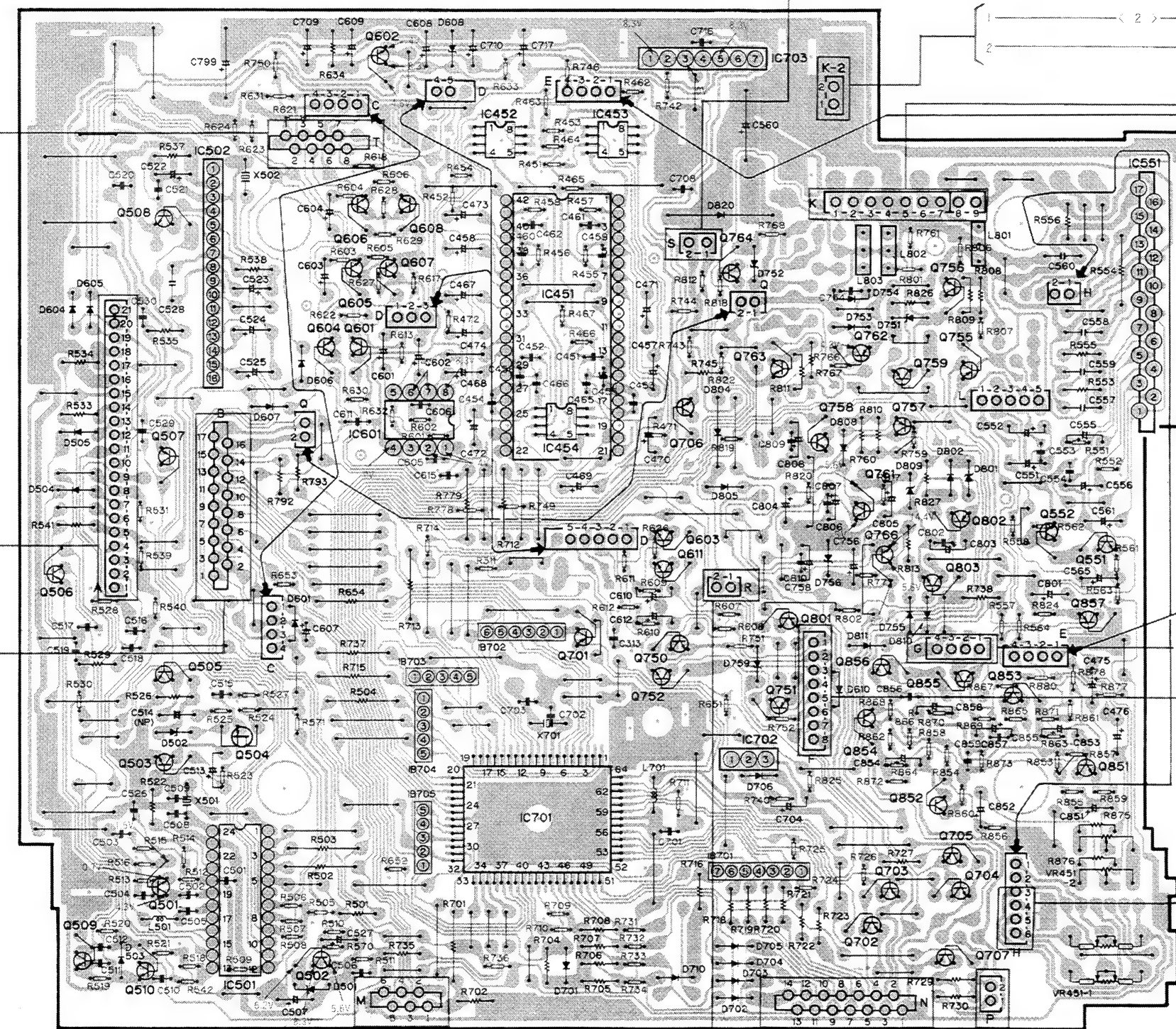






# TUNER AMP P.C. BOARD

Q506 Q508 Q507 Q505 Q504 Q606 Q602 Q604 Q605 Q608 IC451 Q701 Q611 Q750 IC703 Q763 Q801 Q761 Q854 Q705 Q802 Q857 IC551  
IC.Q Q509 Q510 Q501 Q503 IC502 IC501 Q502 Q601 Q607 IC601 IC452 IC454 IC453 Q752 Q706 IC702 Q751 Q758 Q702 Q703 Q707 Q855 Q853 Q552 Q851 Q551  
ADJ



## PEE P.C. BOARD

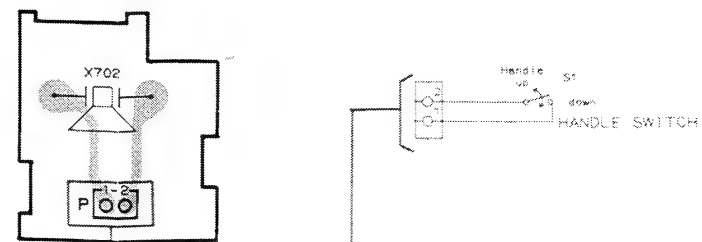
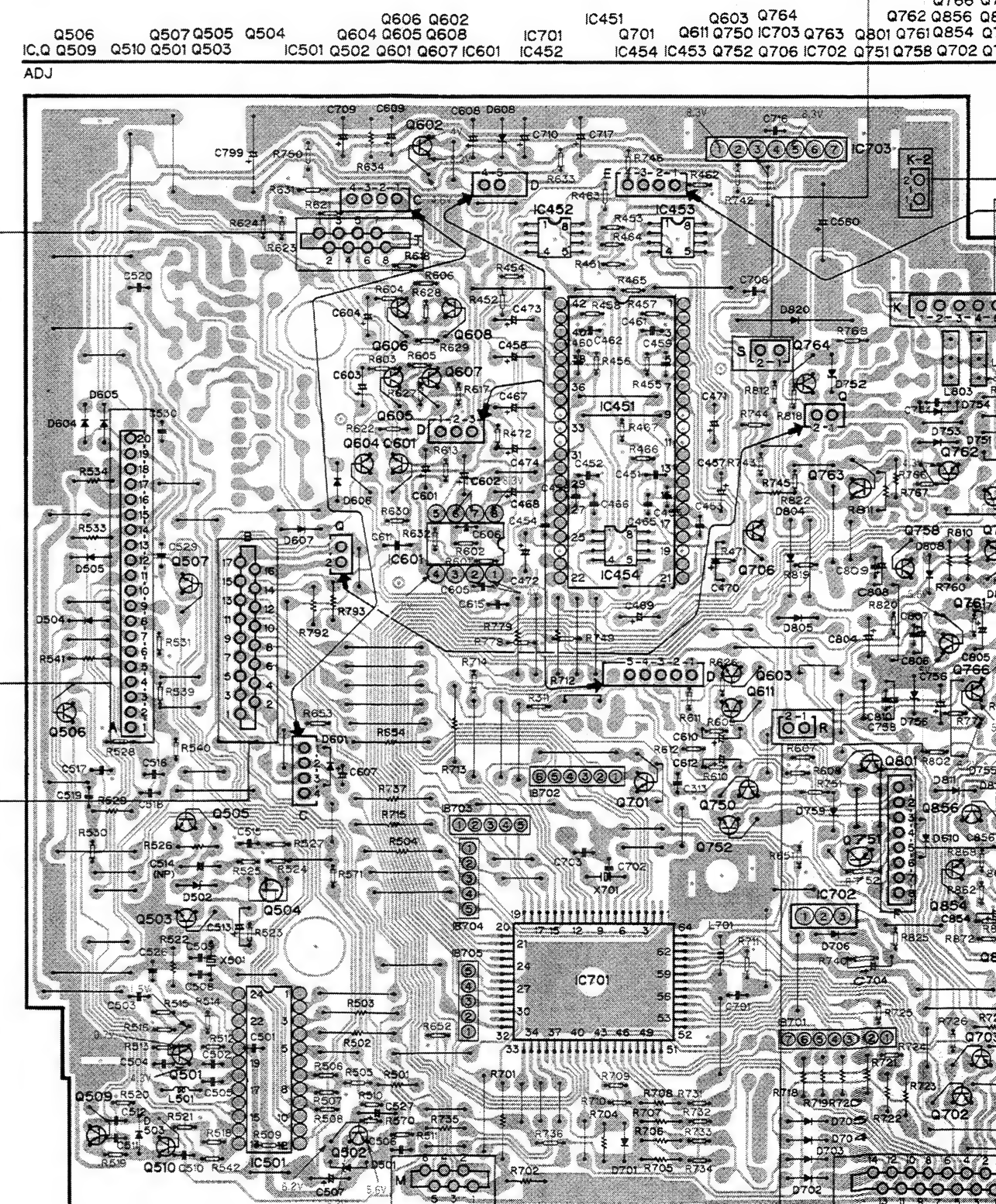


Fig. 9



## 12. CONNECTION DIAGRAM (KEH-8100B, E)







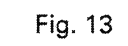
7





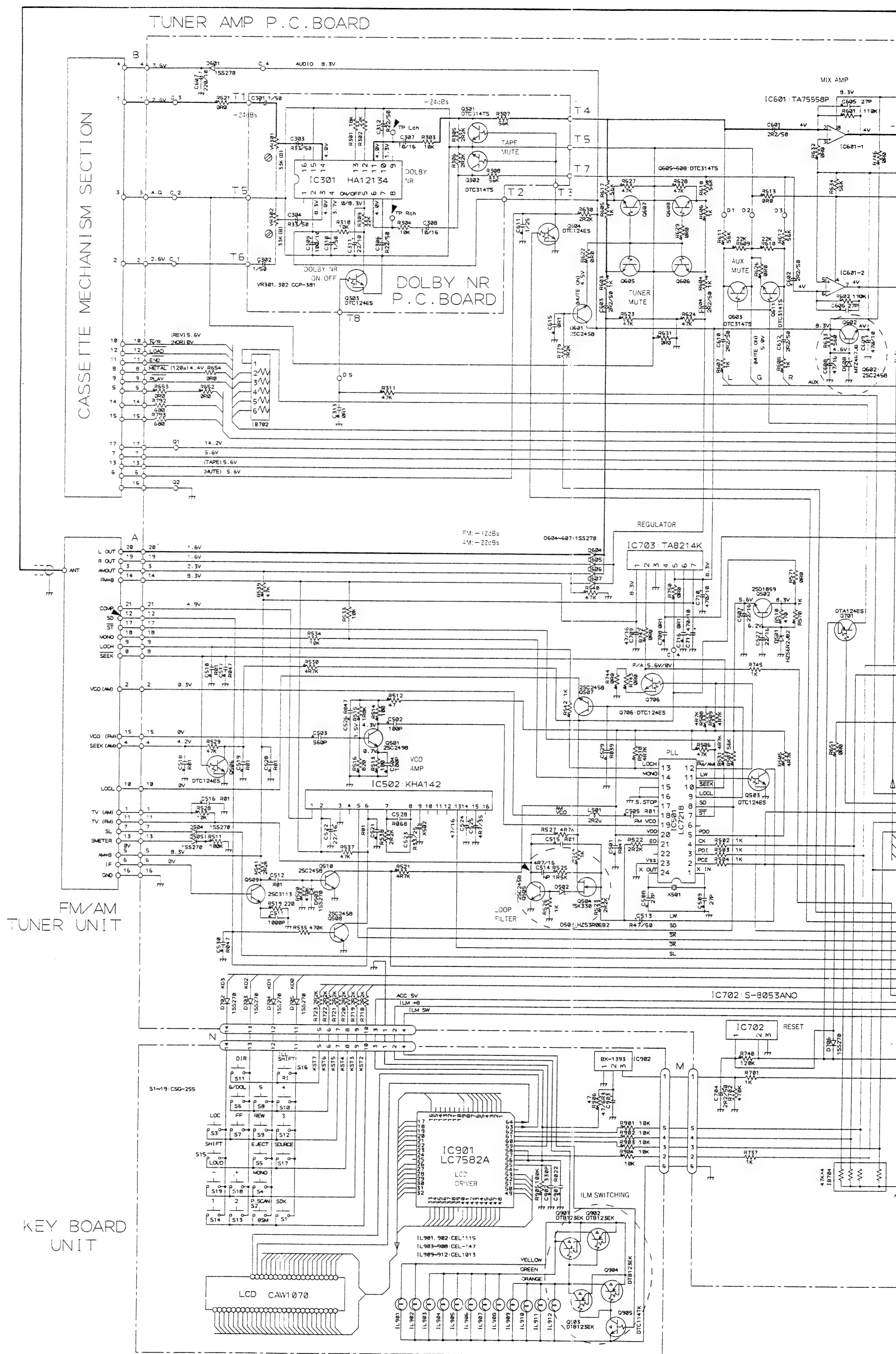


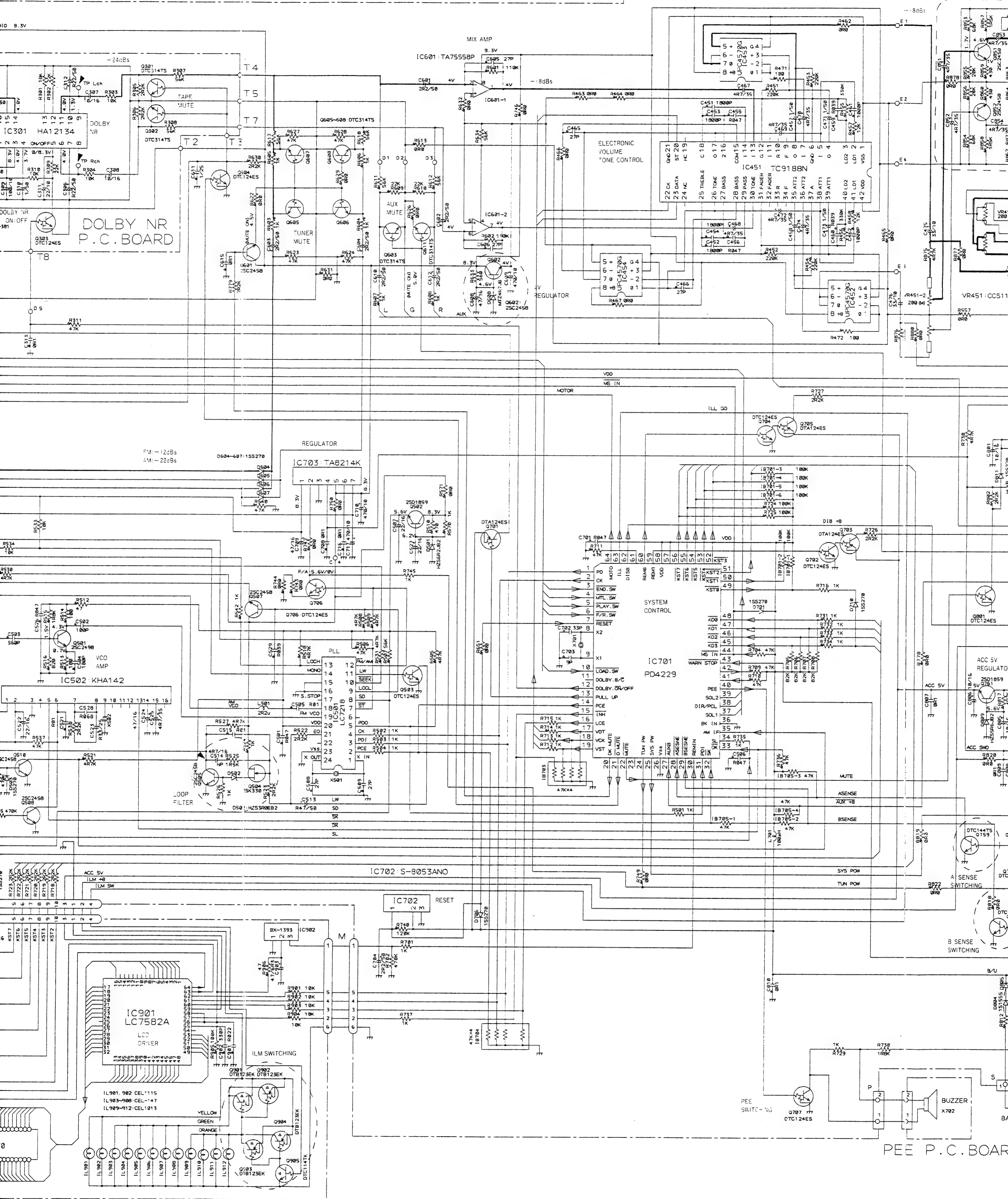
## ADJ





# 10. SCHEMATIC CIRCUIT DIAGRAM (KEH-8100SDK)





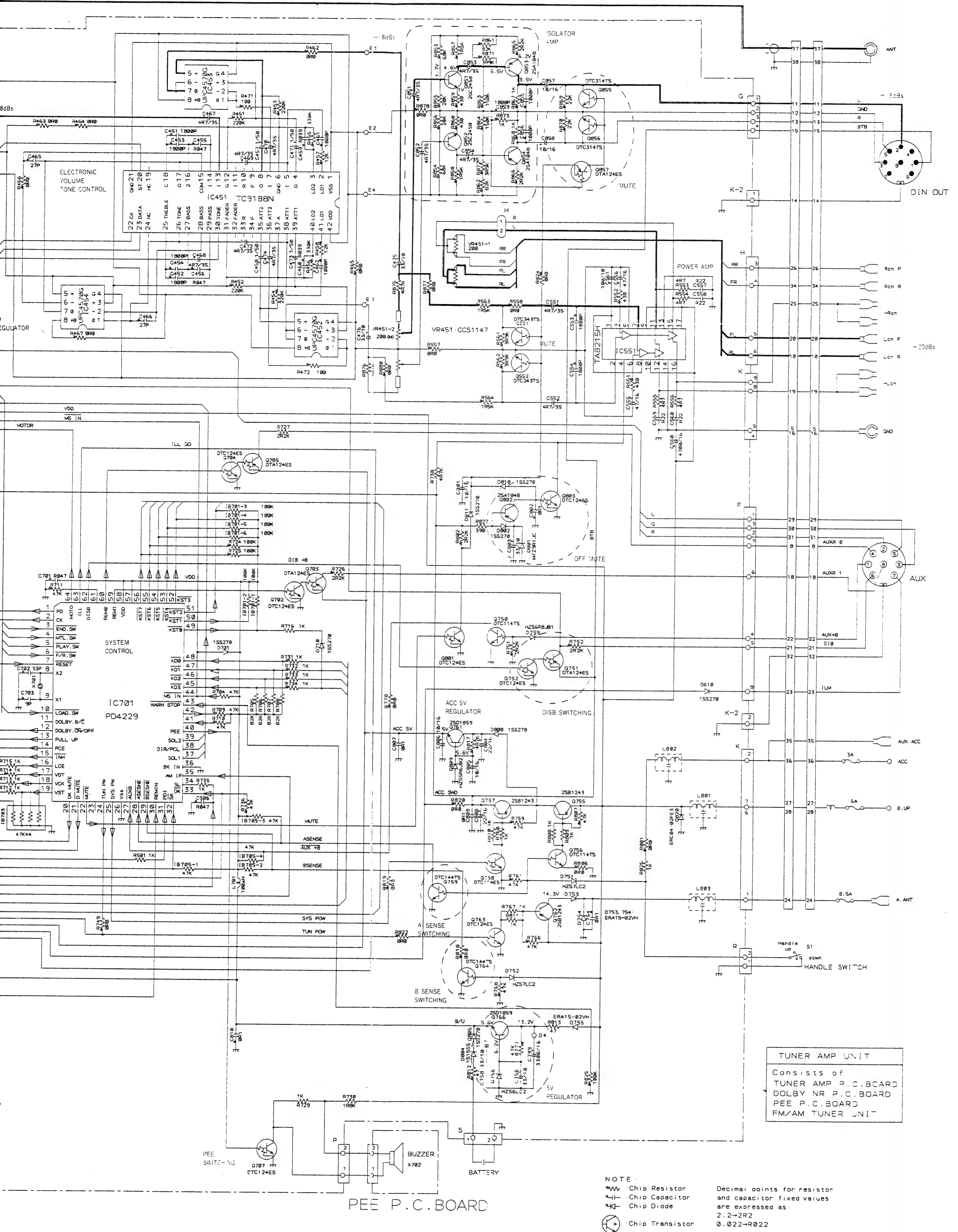
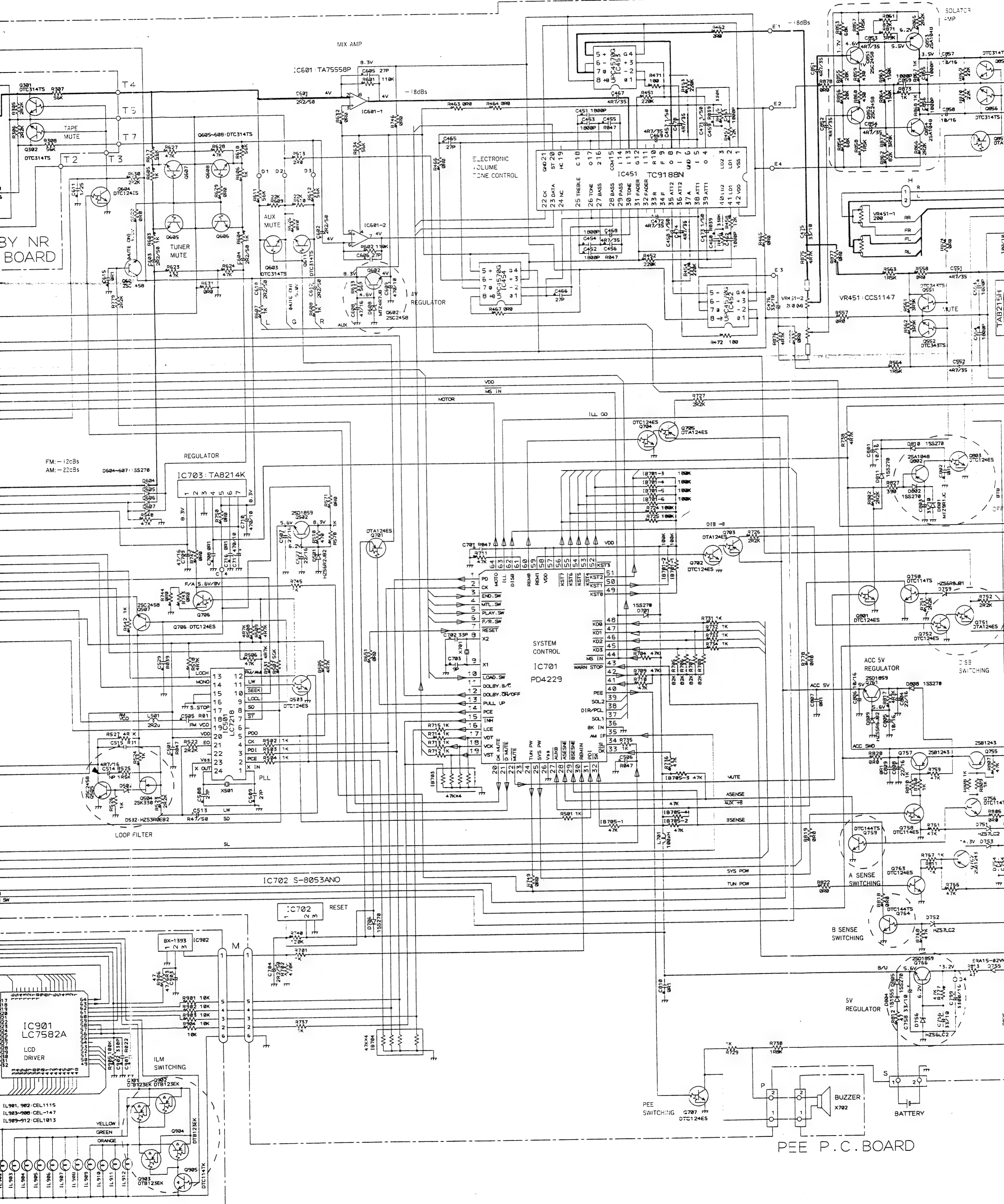


Fig. 10








BY NR  
BOARD

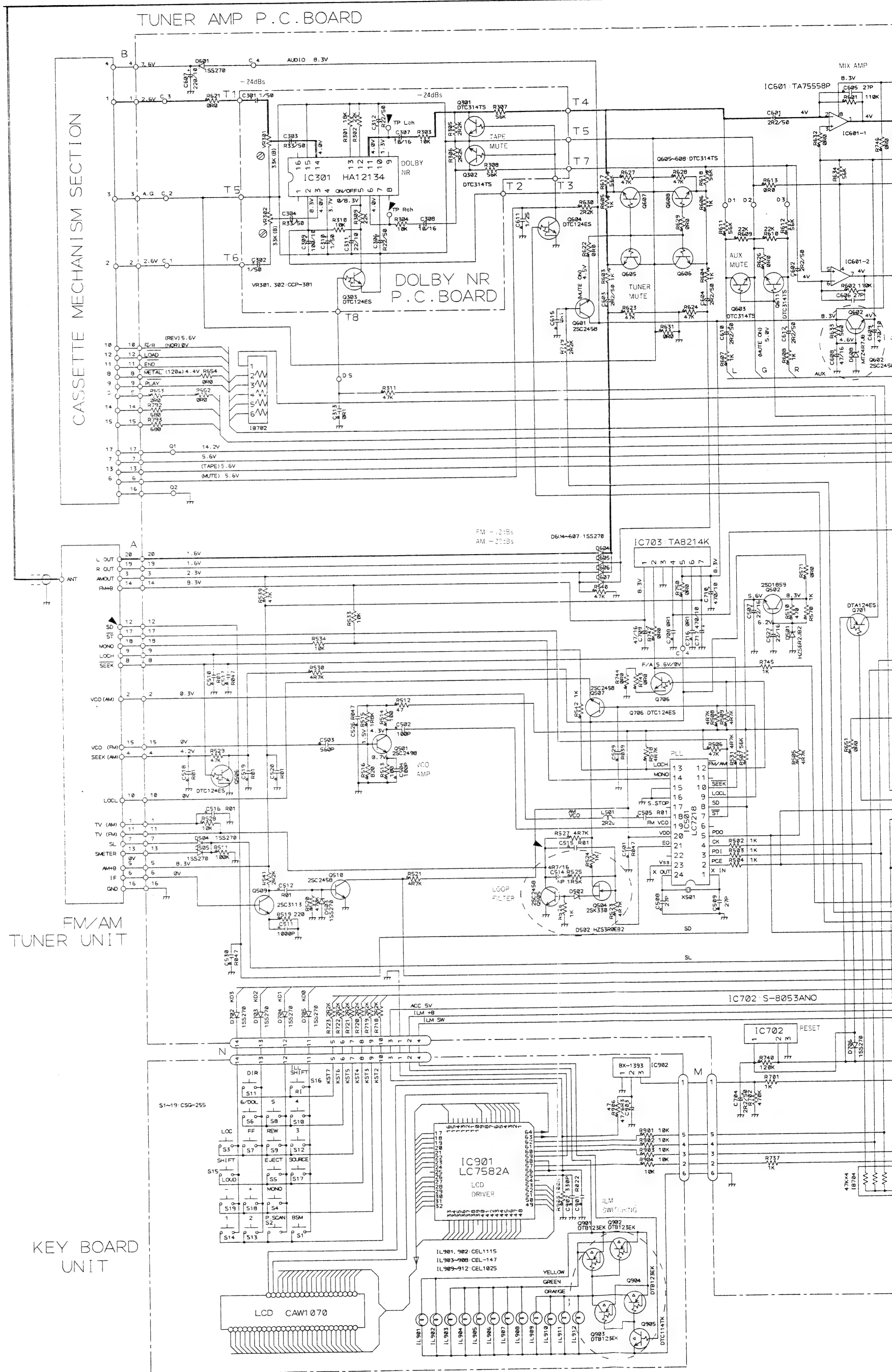
PEE P.C. BOARD



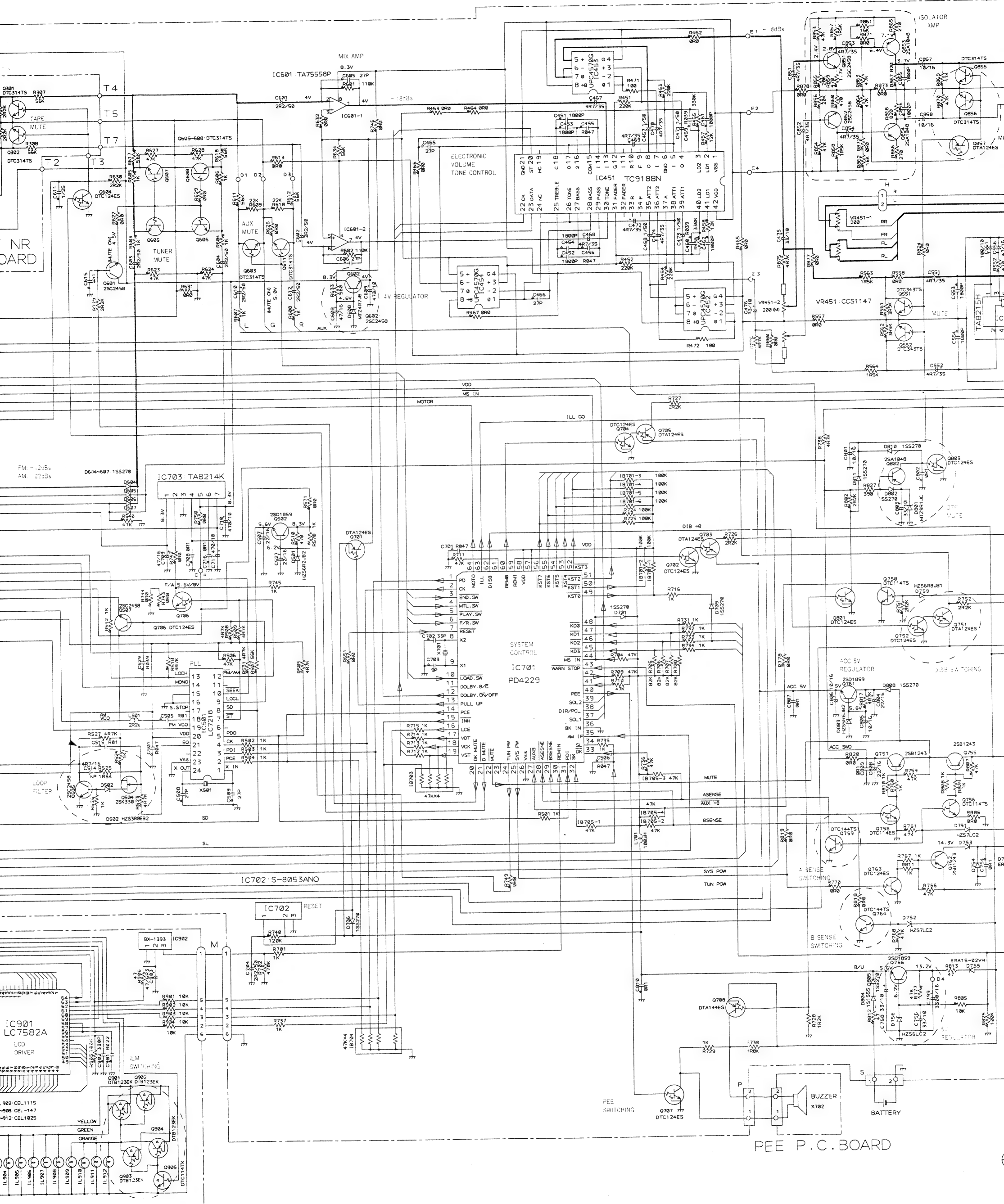
NOTE:

	Chip Resistor	Decimals points for resistor and capacitor fixed values are expressed as:
	Chip Capacitor	2.2=220
	Chip Diode	0.22=2200
	Chip Transistor	

# 14. SCHEMATIC CIRCUIT DIAGRAM (KEH-8100QR)







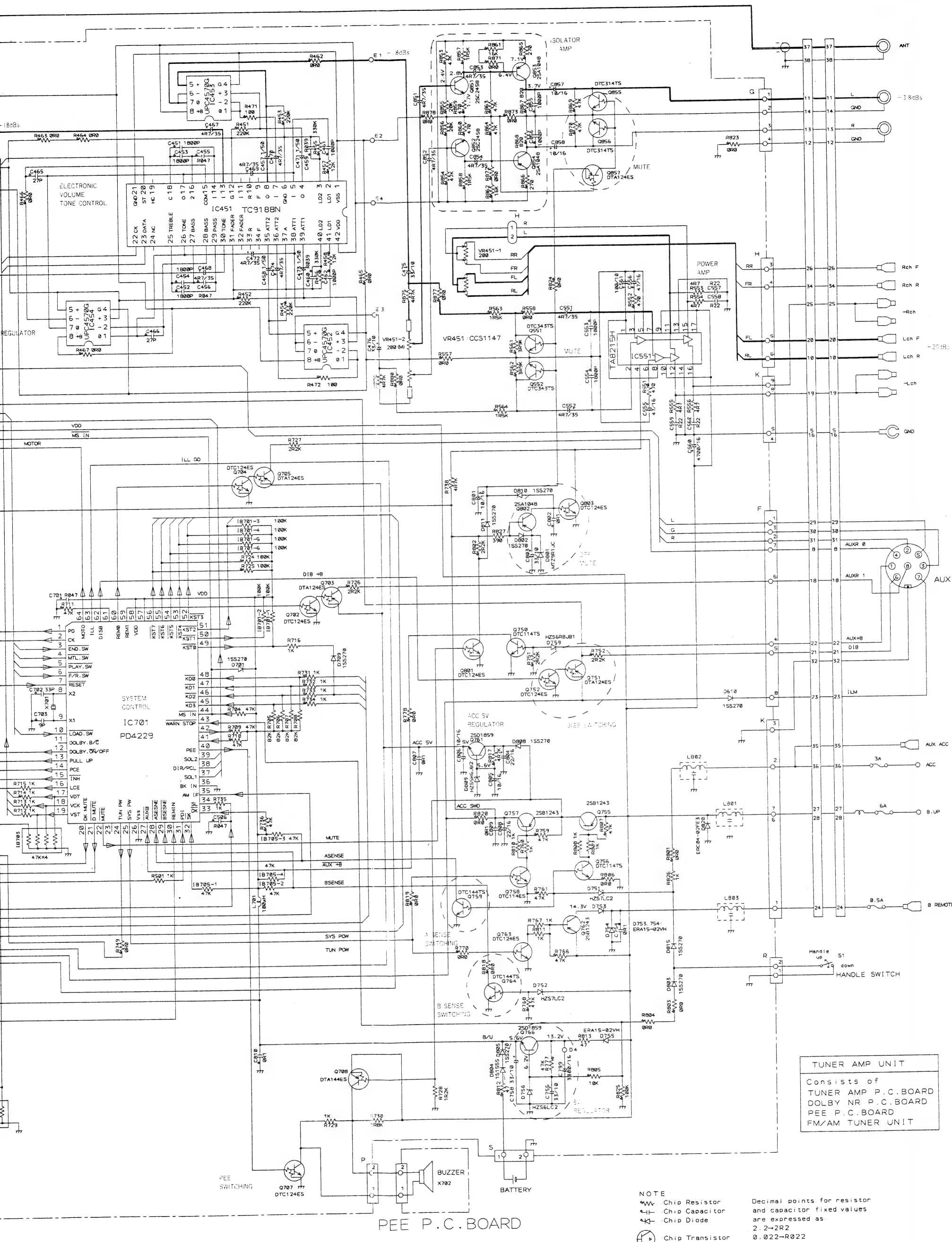
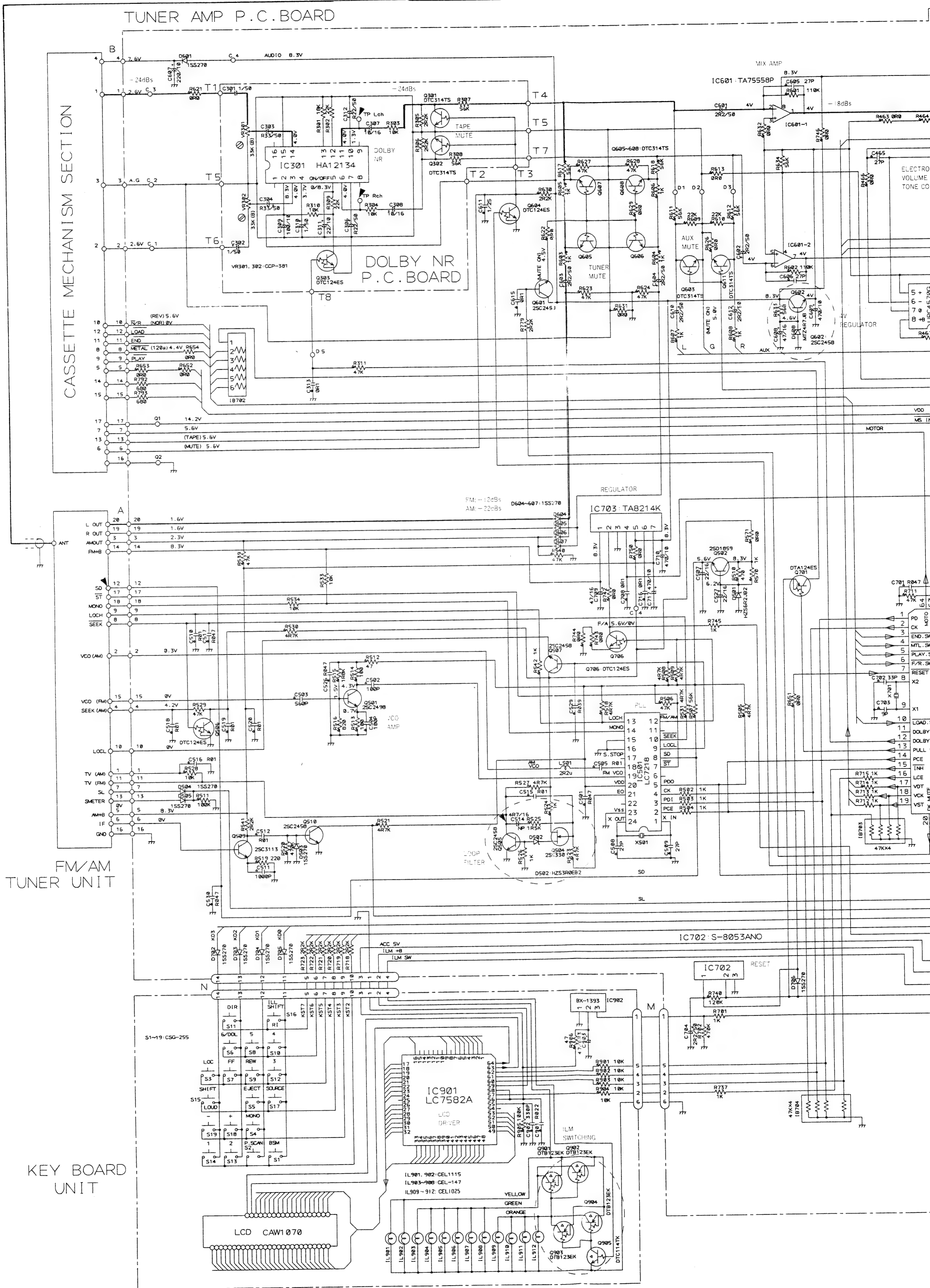
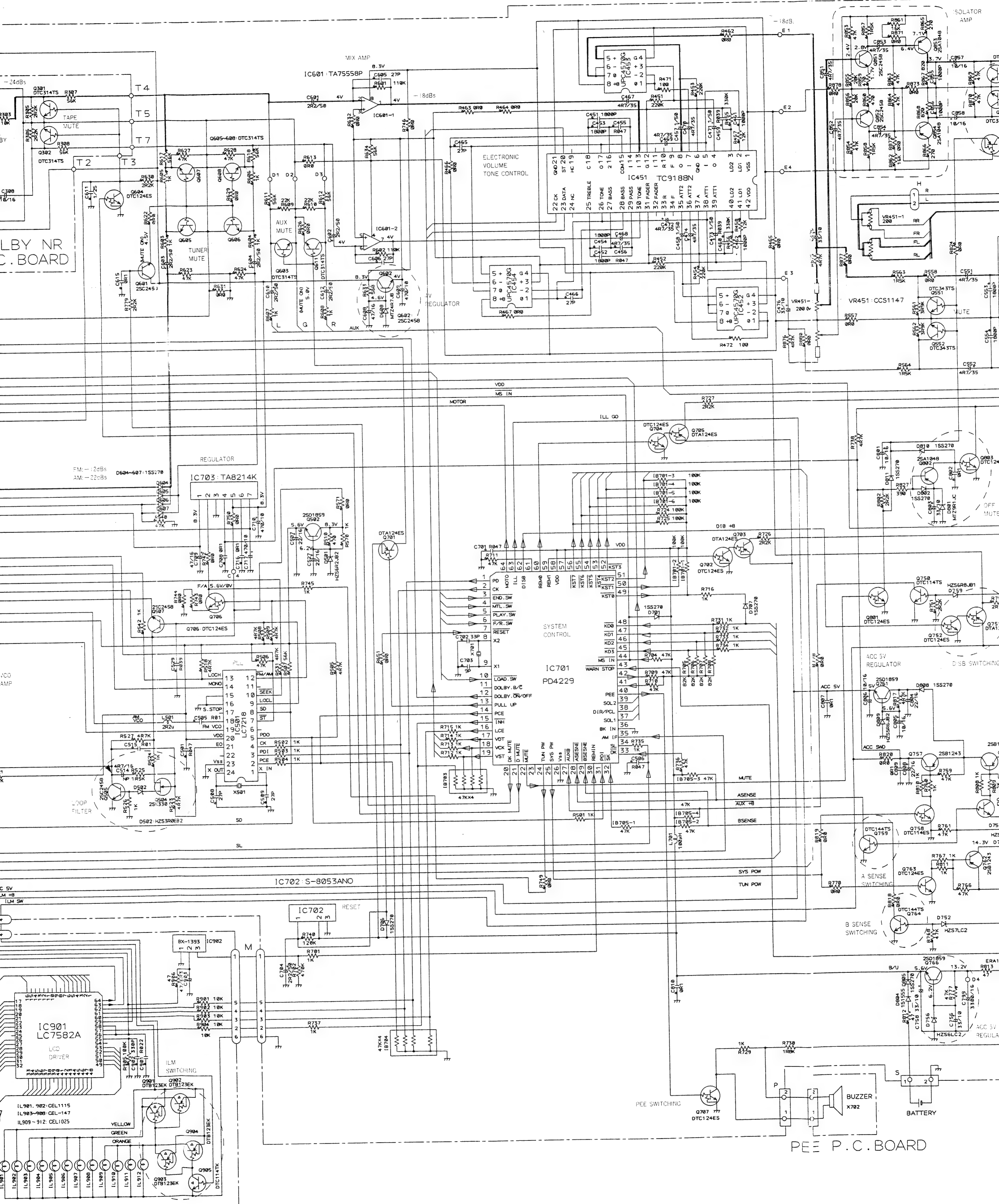


Fig. 14

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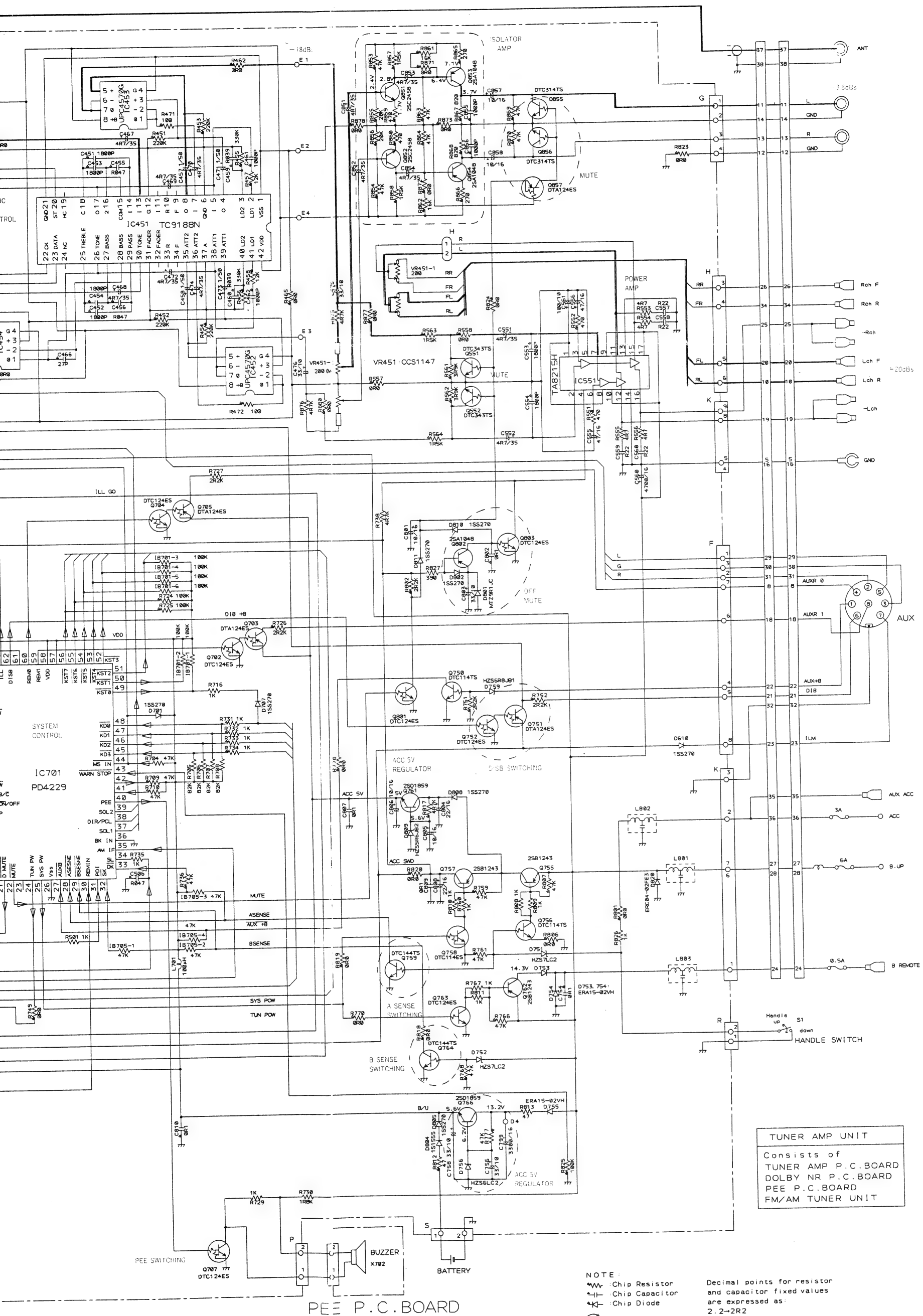
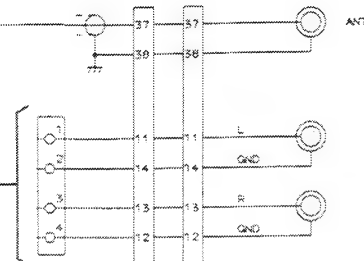


Fig. 15

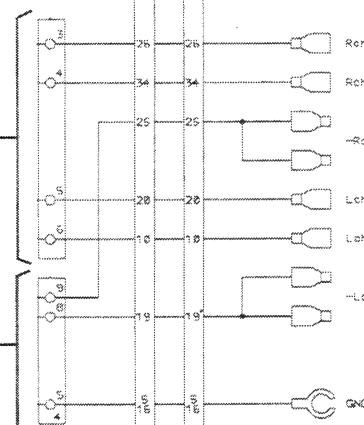
# 16. CONNECTION DIAGRAM (KEH-8150QR/ES)

A

TO FM/AM TUNER UNIT



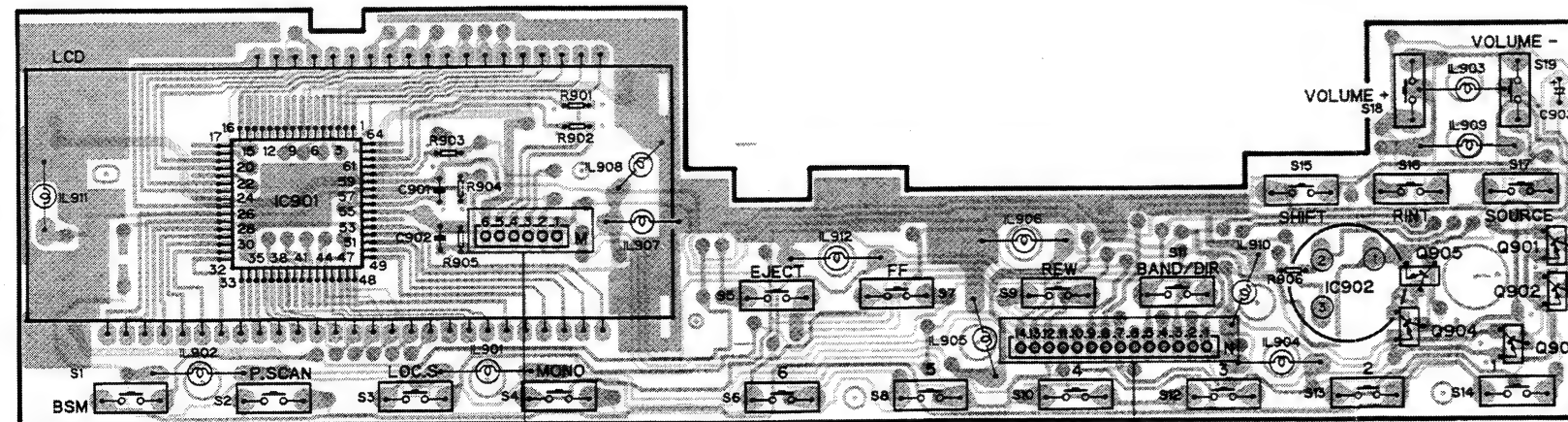
B



C

KEY BOARD UNIT

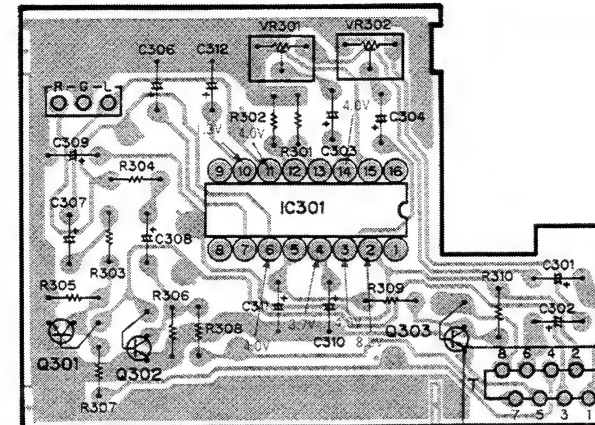
IC, Q IC901



D

DOLBY NR P.C. BOARD

IC, Q Q301 Q302 IC301 Q303  
ADJ VR301 VR302

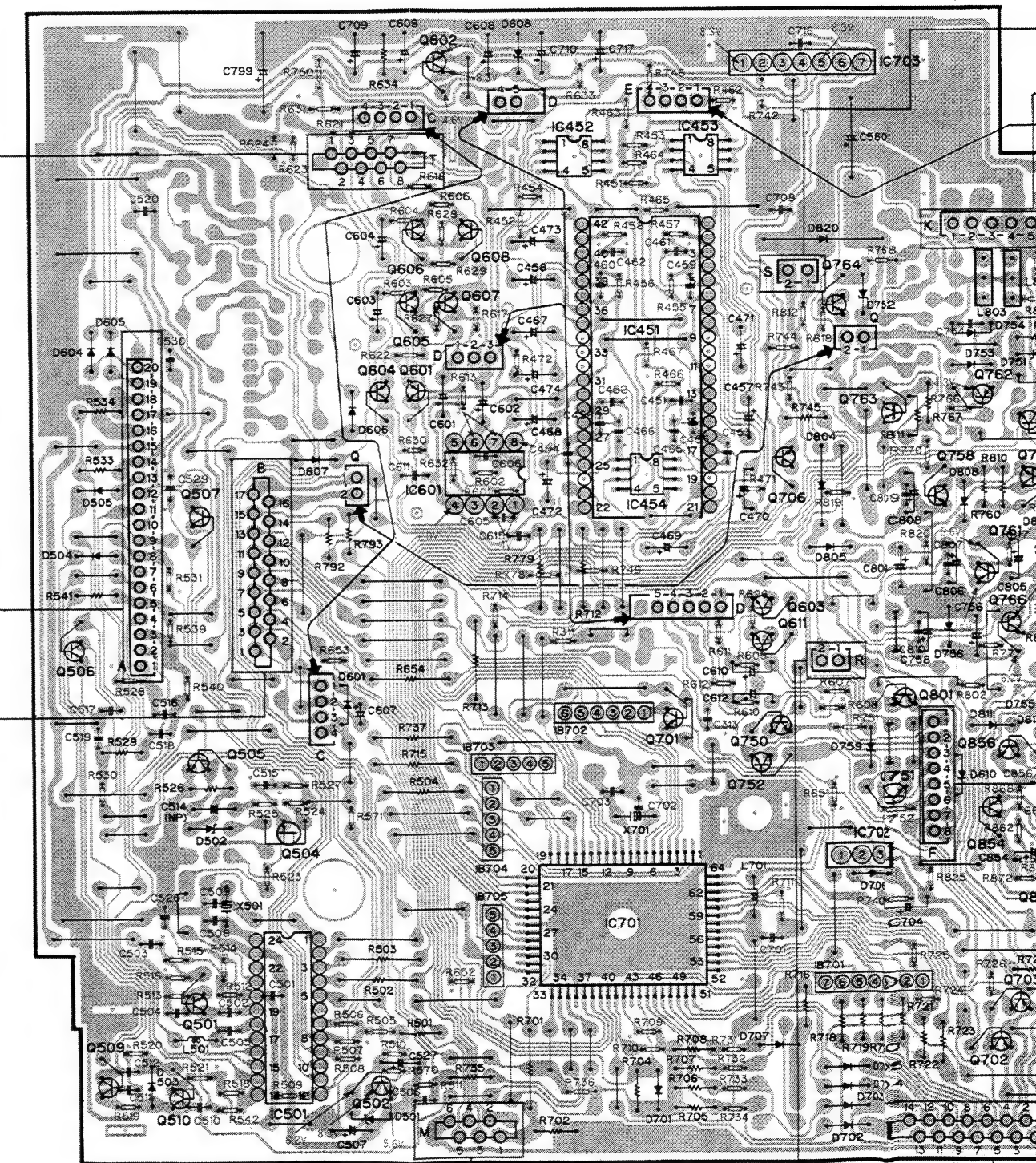


TO FM/AM TUNER UNIT

TO CASSETTE MECHANISM SECTION

TUNER P.C. BOARD

Q506 Q507 Q505 Q504 Q606 Q602 Q604 Q605 Q608 IC701 IC451 Q603 Q764 Q766 Q771  
IC, Q Q509 Q510 Q501 IC501 Q502 Q601 Q607 IC601 IC452 IC454 IC453 Q752 Q706 IC702 Q751 Q758 Q702 Q771





## ADJ



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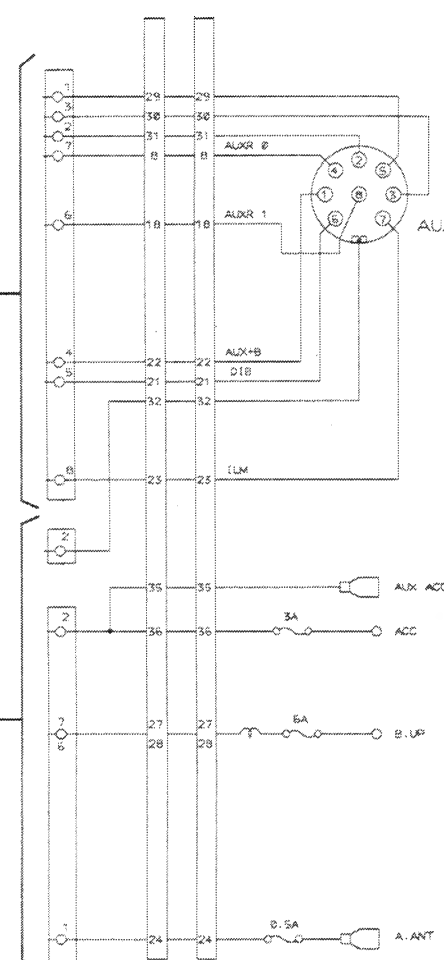
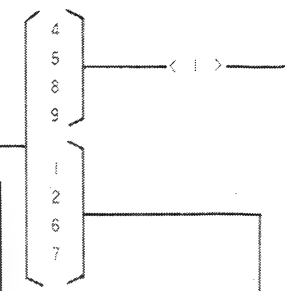
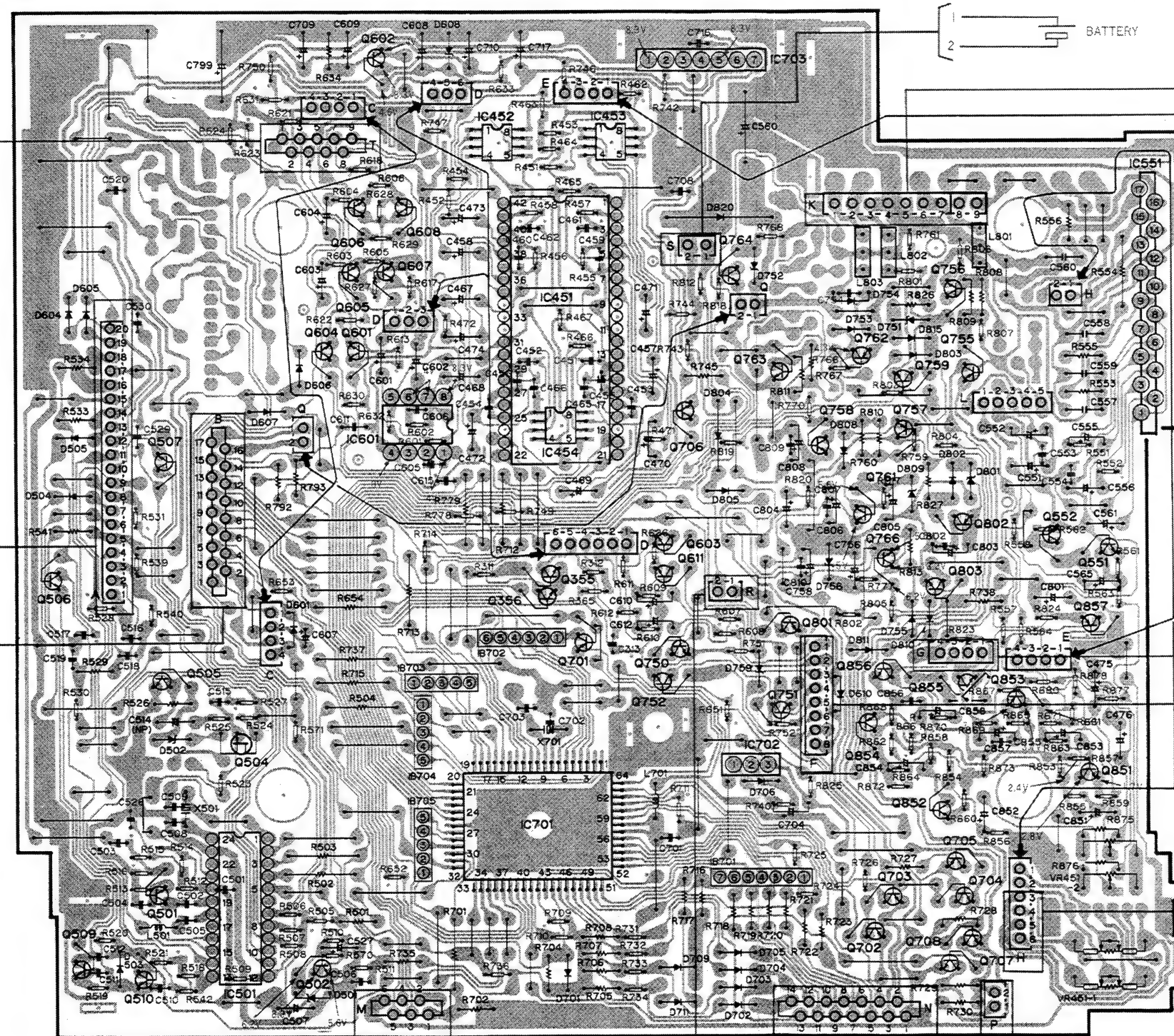






# TUNER AMP P.C.BOARD

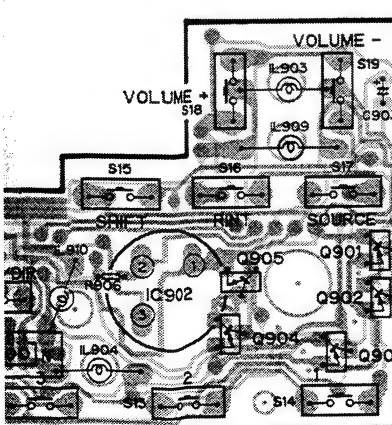
Q506 Q507 Q505 Q504 Q606 Q602 IC451 Q603 Q764 Q766 Q757 Q759 Q755 Q762 Q856 Q852 Q704 Q756 Q801 Q761 Q854 Q705 Q708 Q802 Q857 IC551  
 IC.Q Q509 Q510 Q501 IC501 Q502 Q601 Q607 IC601 IC452 Q356 IC454 IC453 Q752 Q706 IC702 Q751 Q758 Q702 Q703 Q707 Q855 Q853 Q552 Q851 Q551  
 ADJ



TO FM/AM TUNER UNIT

CASSETTE MECHANISM SECTION

Q905 Q901 IC902 Q904 Q903 Q902



PEE P.C.BOARD

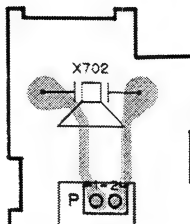


Fig. 17

# 19.3 FM/AM TUNER UNIT (KEH-8150QR/ES)

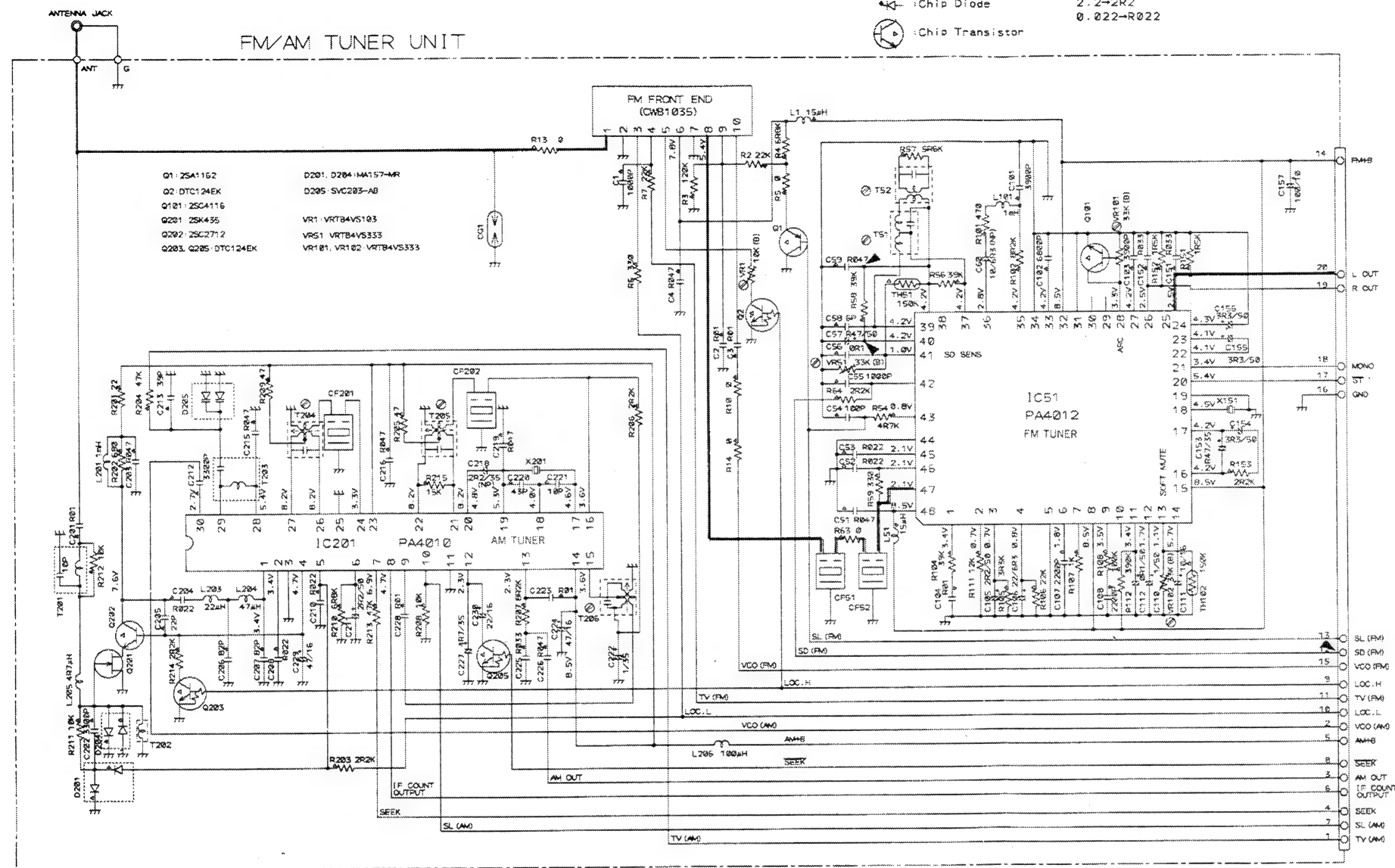


Fig. 23

# 19.4 FM/AM TUNER UNIT (KEH-8100QR, KEH-8150)

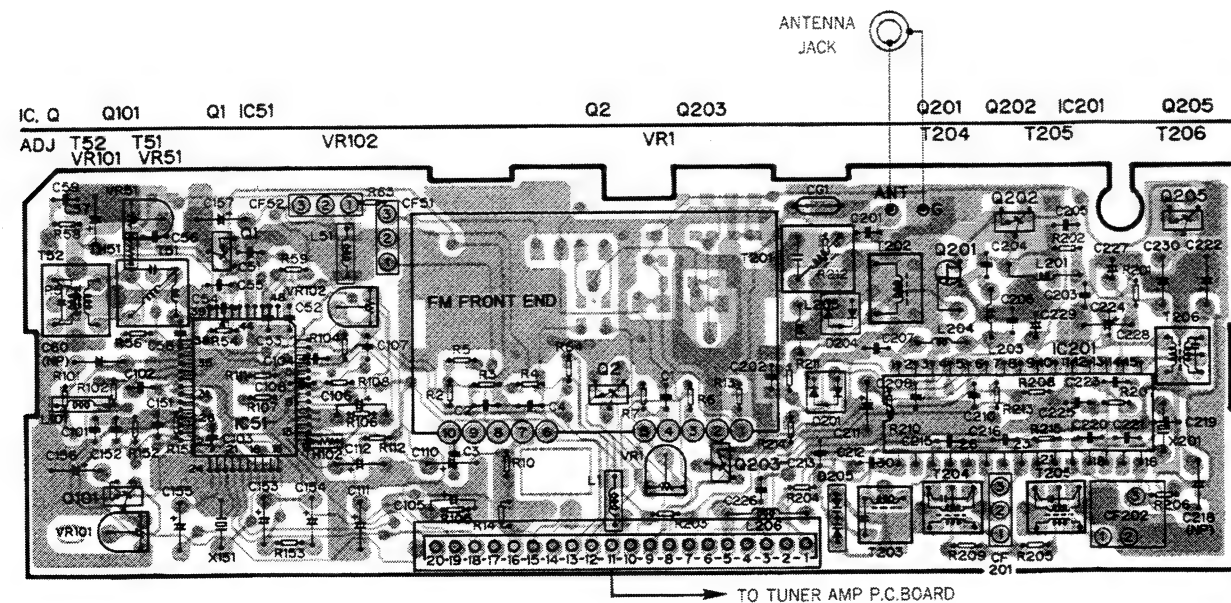
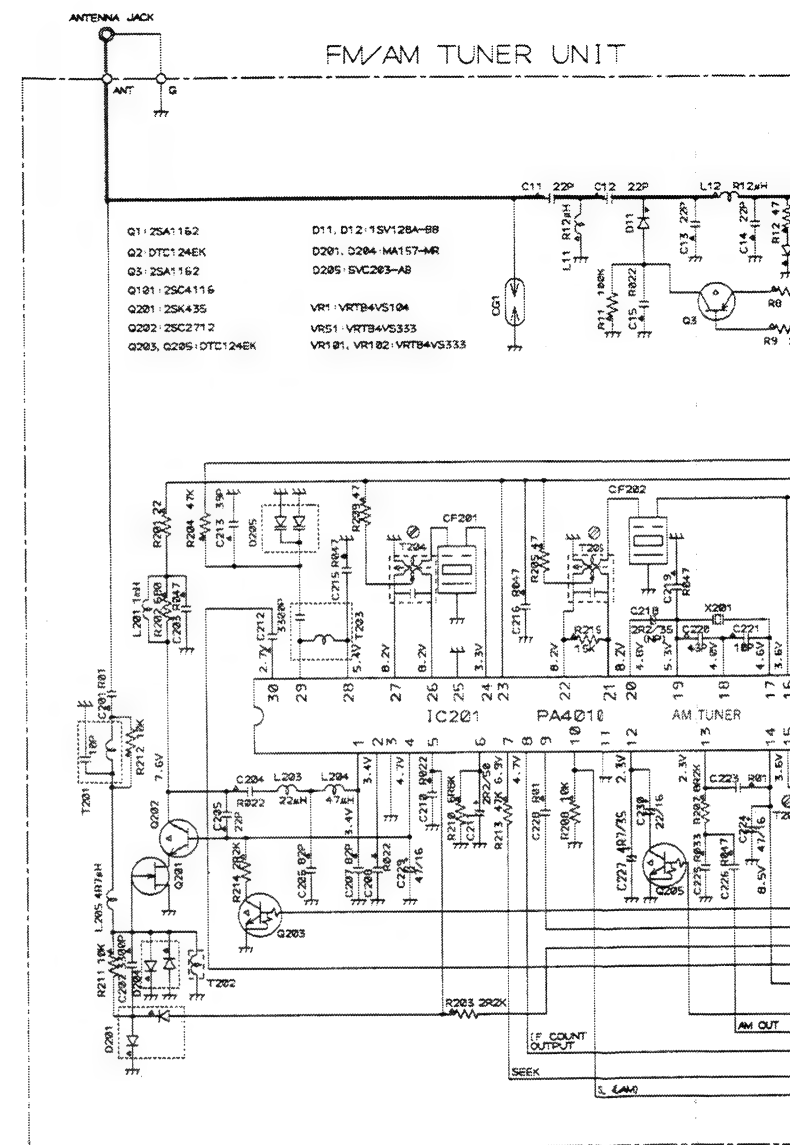
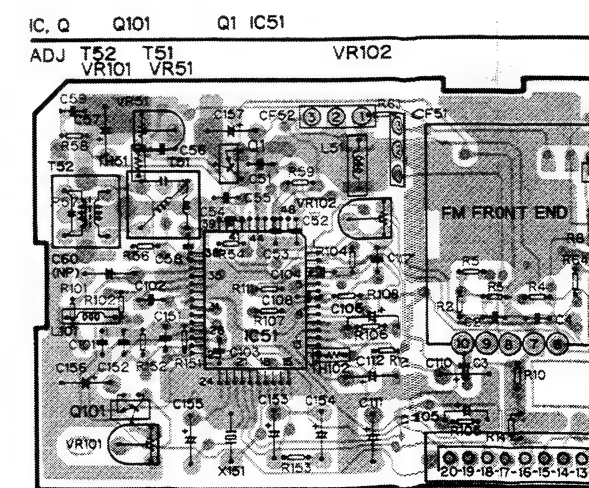


Fig. 24





NOTE:

- Chip Resistor  
 Chip Capacitor  
 Chip Diode  
 Chip Transistor

Decimal points for resistor and capacitor  
fixed values are expressed as:  
2.2→2R2  
0.022→R022

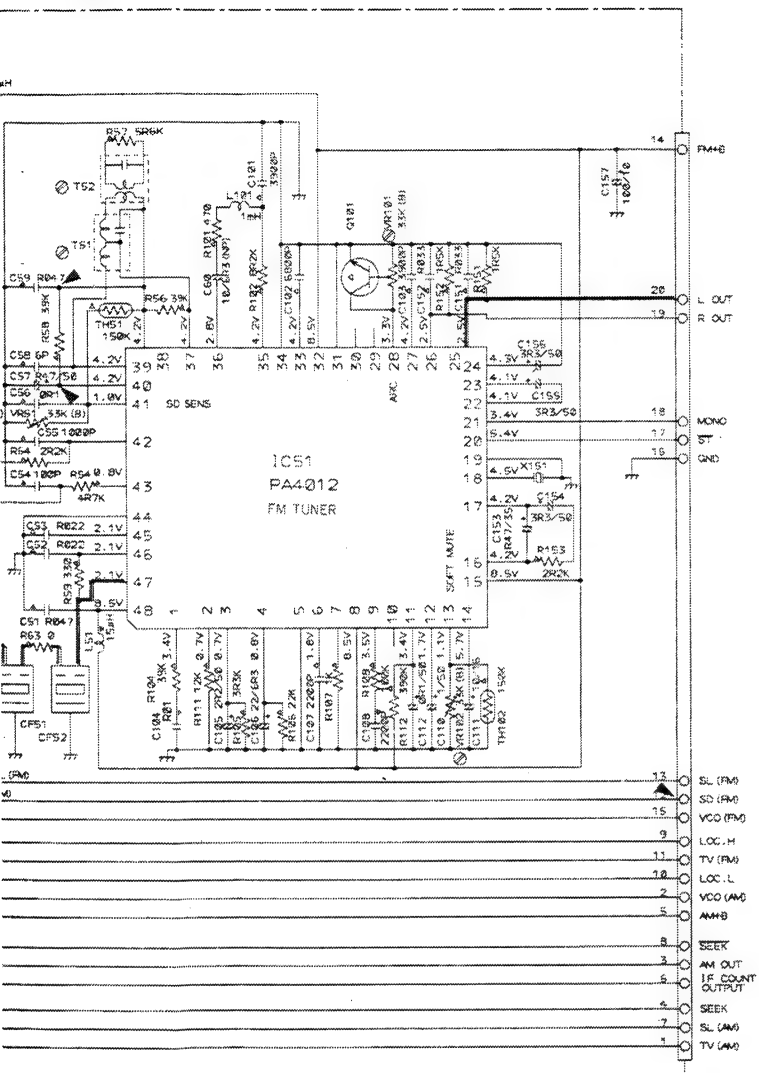


Fig. 23

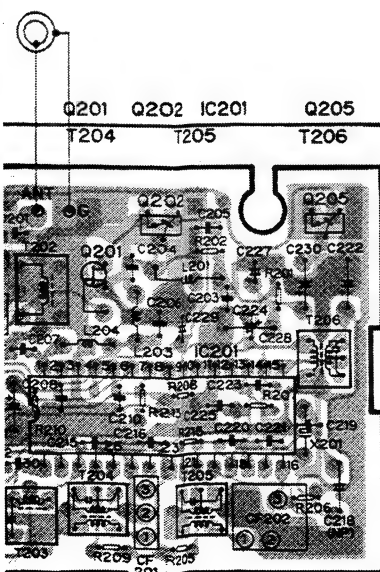


Fig. 24

## 19.4 FM/AM TUNER UNIT (KEH-8100QR, KEH-8150QR/CA, 700QR)

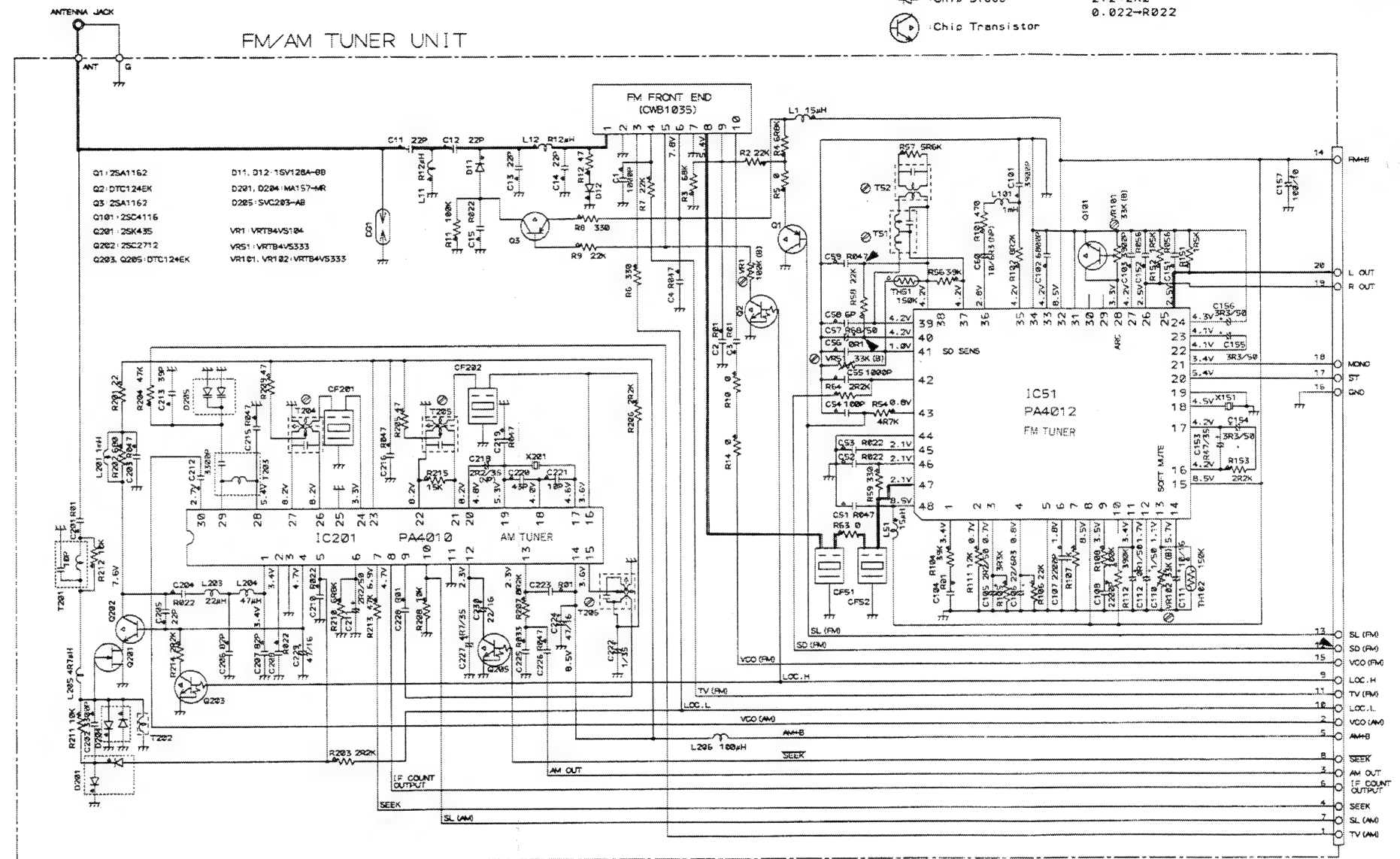


Fig. 25

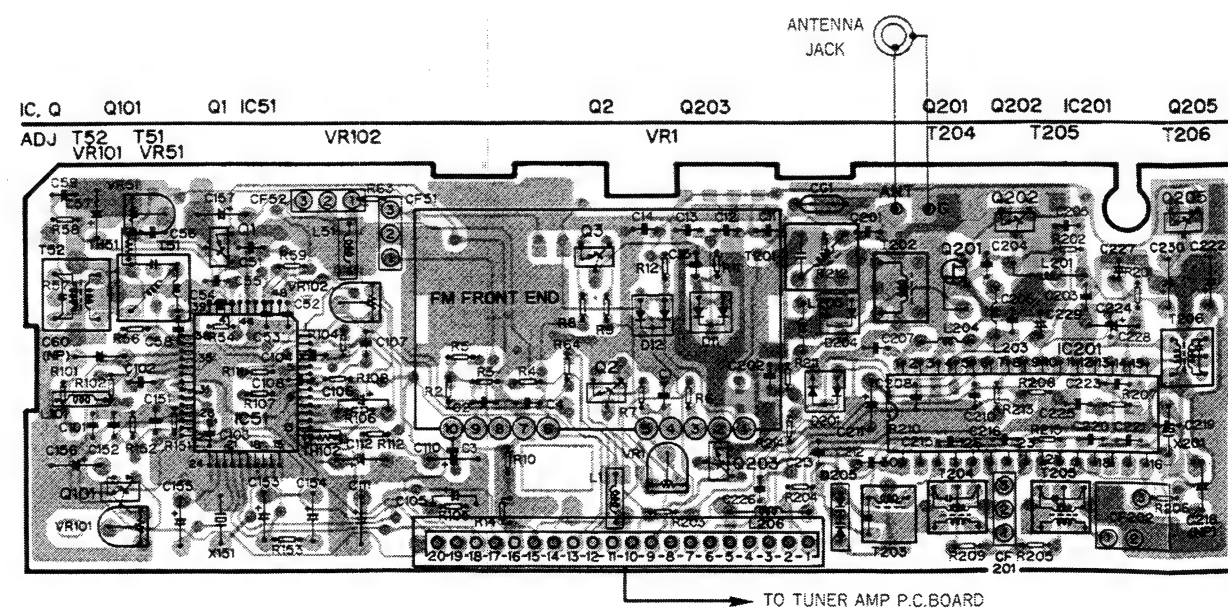


Fig. 26

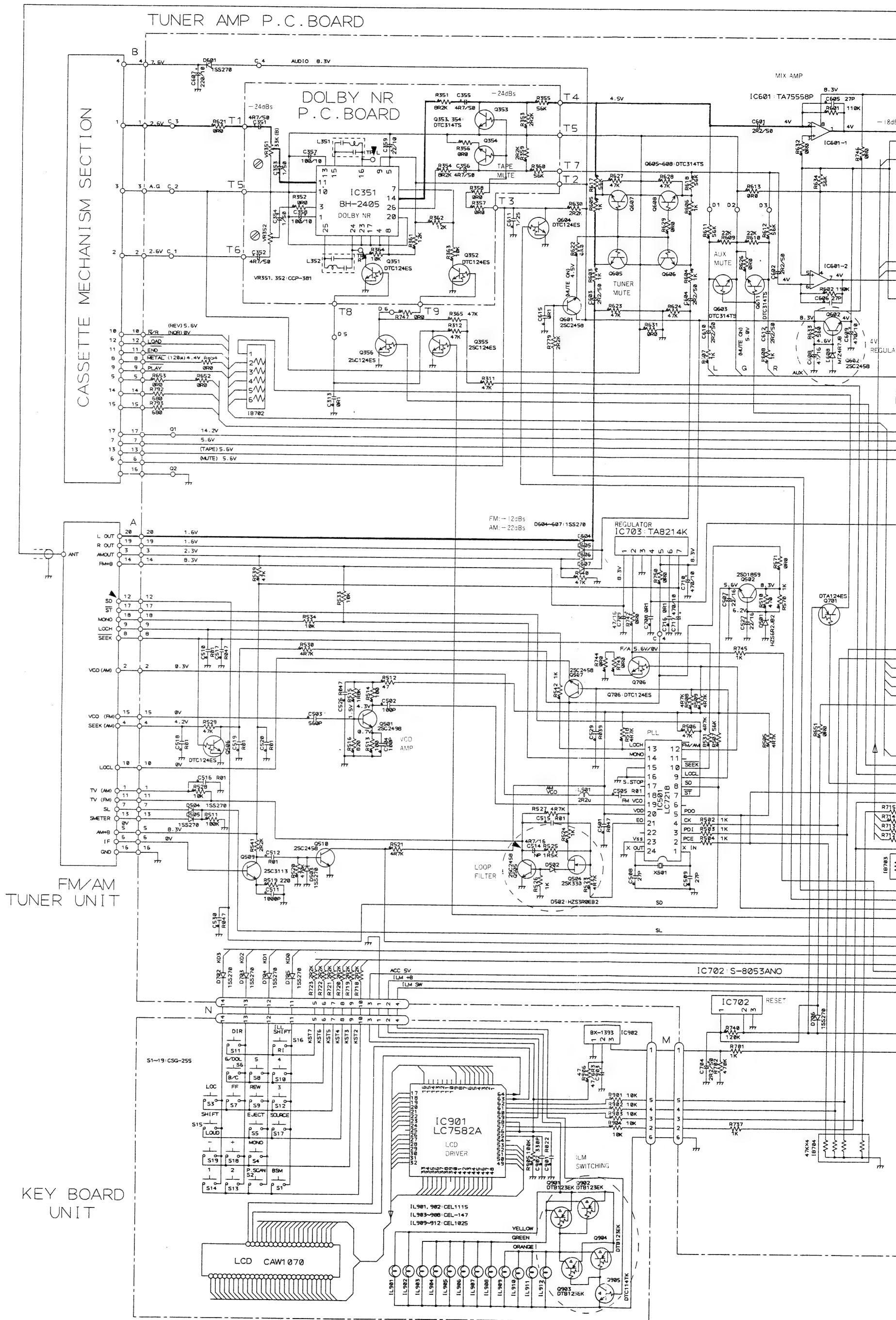
A

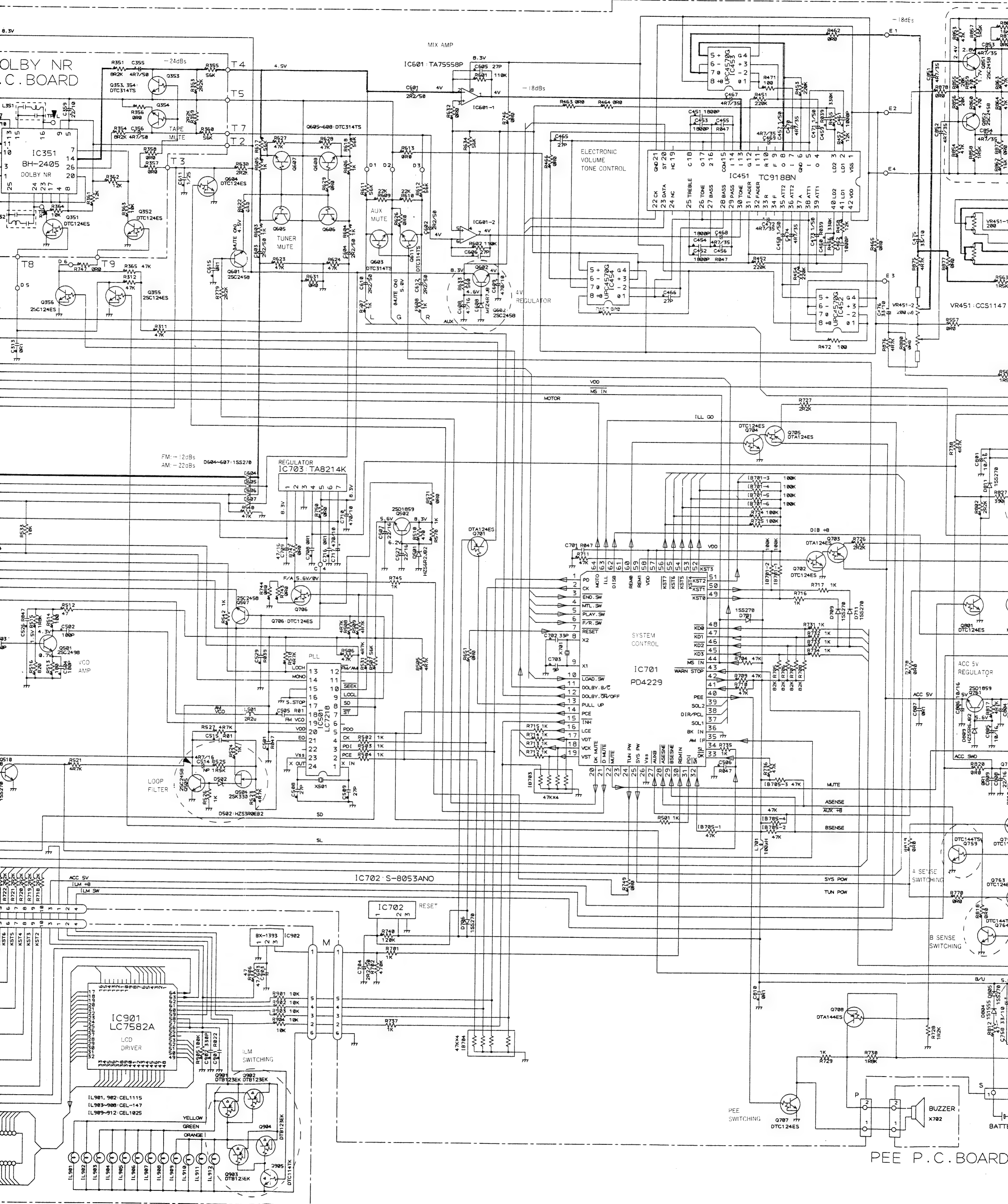
B

C

D

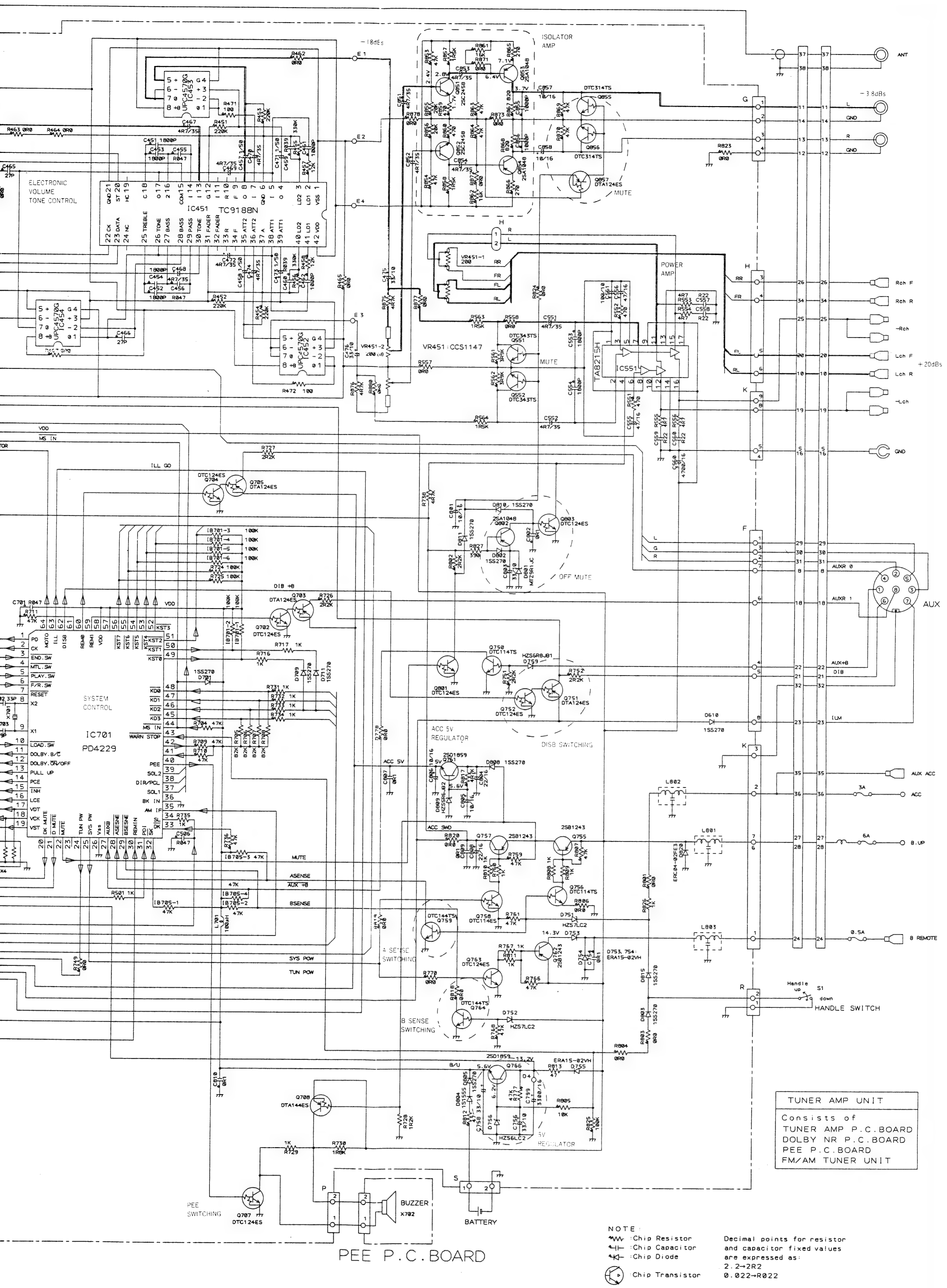
## 18. SCHEMATIC CIRCUIT DIAGRAM





PEE P.C. BOARD





A

B

C

D

E

F

Fig. 18

# 19. CIRCUIT DIAGRAM AND P.C. BOARDS PATTERN

## 19.1 FM/AM TUNER UNIT (KEH-8100SDK)

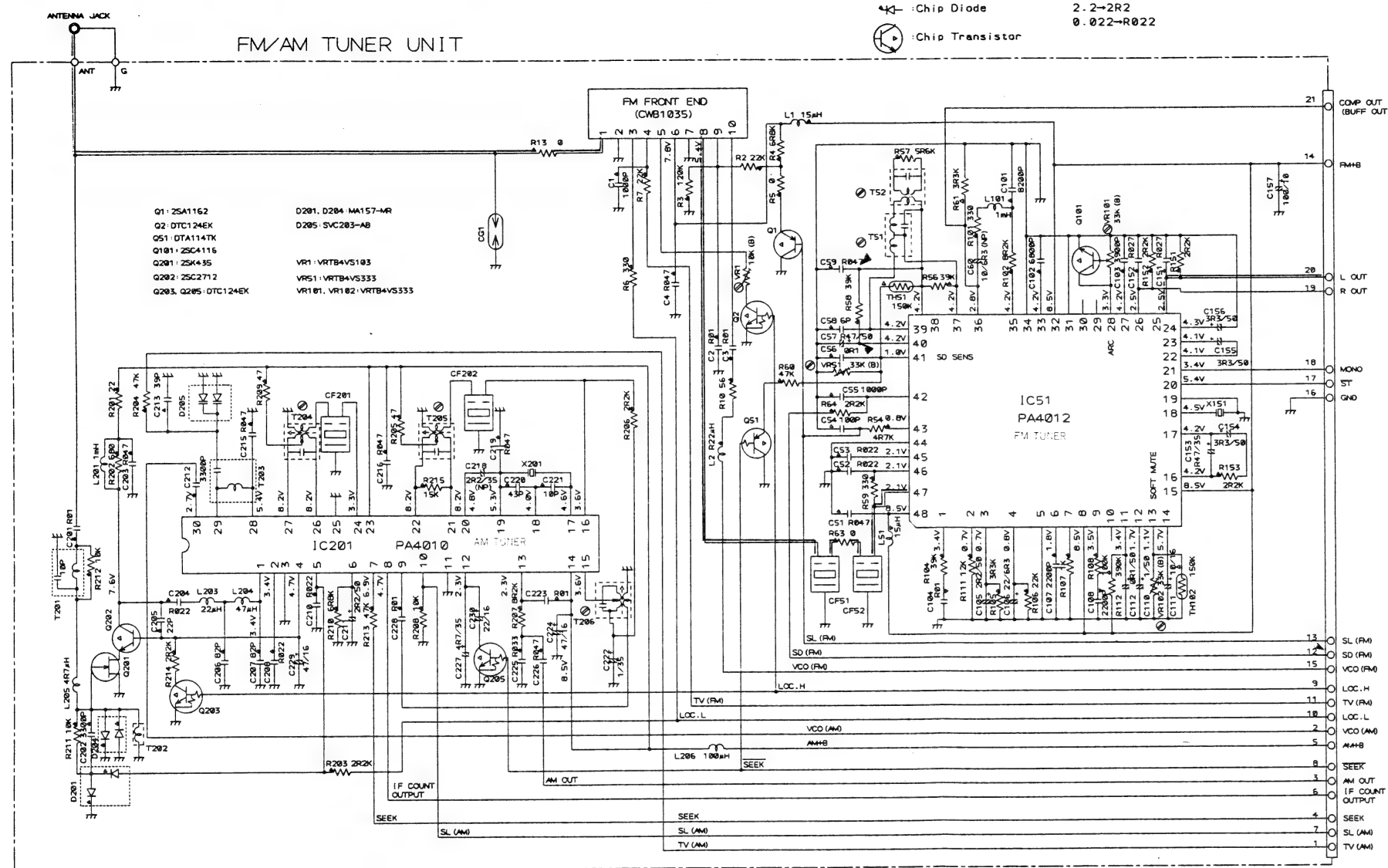


Fig. 19

## 19.2 FM/AM TUNER UNIT (KEH-8100B, 8101B)

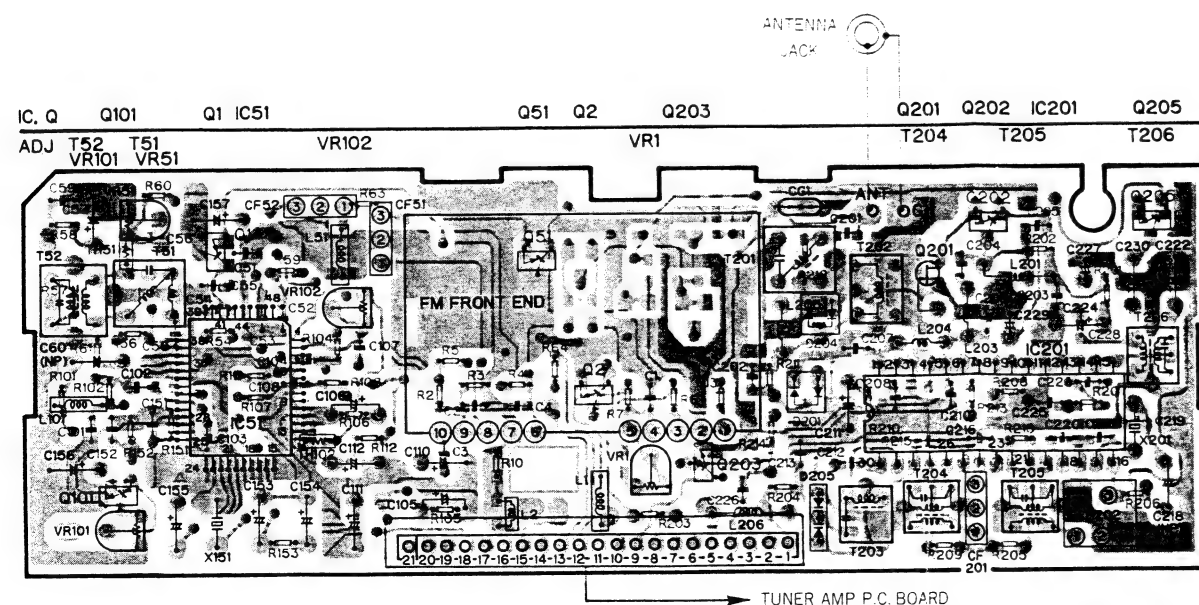
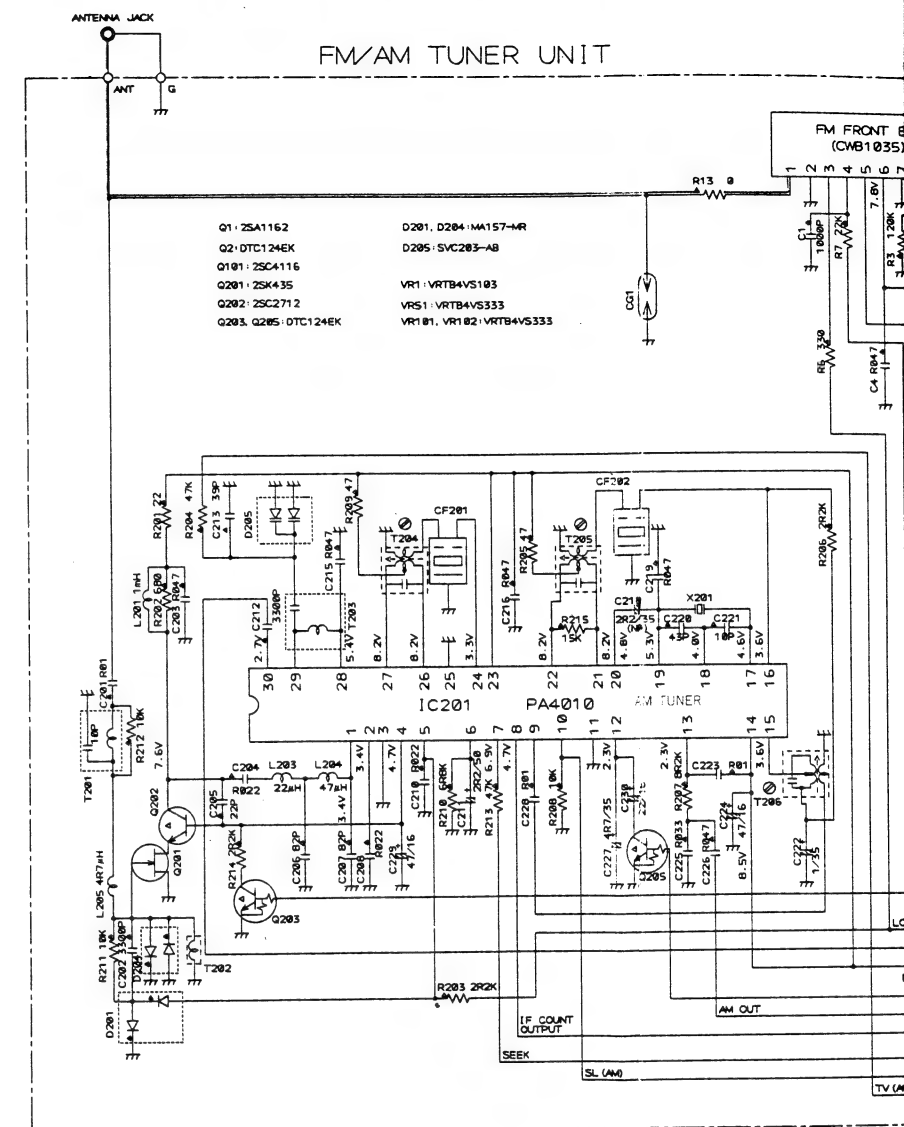
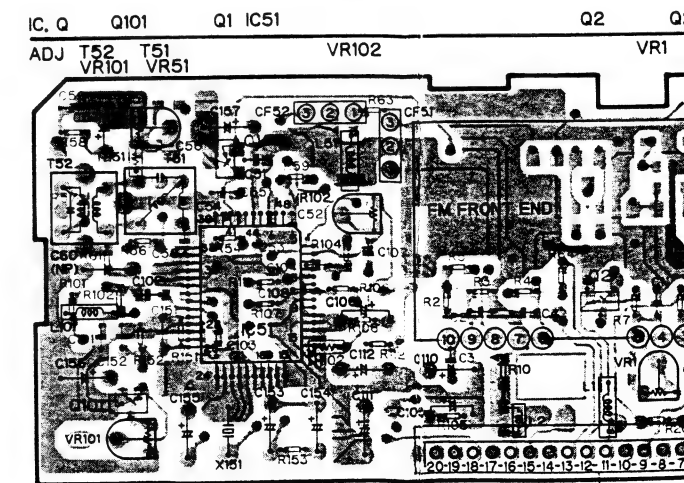


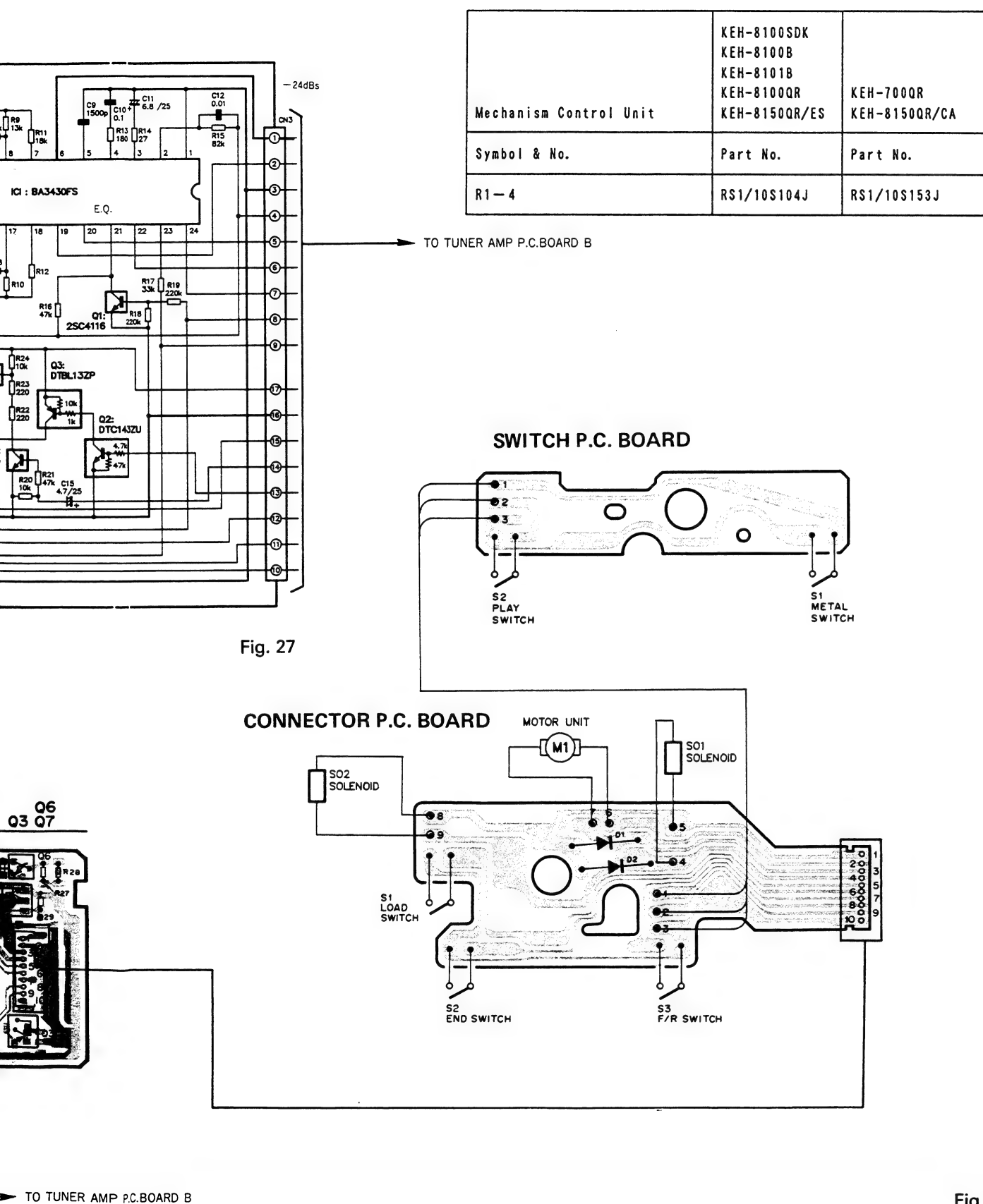
Fig. 20











## 20. EXPLODED VIEW

### NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

### ● Parts List (KEH-8100SDK, 8100B, 8101B, 8100QR)

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Remote Control Assy CXA3281 (KEH-8100B, 8101B)		28	Cushion	
	Remote Control Assy CXA3283 (KEH-8100QR)		29	Stopper	
2	Cover (KEH-8100B, KEH-8101B, 8100QR)	CZN3224	30	Spacer	
3	Screw	BMZ26P050FMC	31	Button	CAC1988
● 4	Cassette Mechanism Assy	EXK1410	32	Button	CAC1987
● 5	Mechanism Control Unit	CWM1967	33	Lens	CNV2248
6	Connector		34	Cushion	
7	Connector		35	Film	
8	Connector		36	Button	CAC2145
9	Screw	CBA1022	37	Button	CAC2142
● 10	Key Board Unit (KEH-8100SDK, 8100B)	CWS1163	38	Button	CAC2144
	Key Board Unit (KEH-8101B)	CWS1154	39	Button	CAC2143
	Key Board Unit (KEH-8100QR)	CWS1152	40	Knob	CAA1199
11	Screw	BPZ20P060FMC	41	Grille Unit (KEH-8100SDK)	CXA3028
12	P. C. Board	CNP2217		Grille Unit (KEH-8100B)	CXA3029
13	P. C. Board	CNP2216		Grille Unit (KEH-8101B)	CXA3030
14	Lamp	CEL-147		Grille Unit (KEH-8100QR)	CXA3031
15	Spacer	CNM1642	42	Spring	CBH1129
16	.....		43	Door (KEH-8100SDK, KEH-8100B, 8101B)	CAT1223
17	Lamp (KEH-8100SDK, KEH-8100B, 8101B)	CEL1013		Door (KEH-8100QR)	CAT1272
	Lamp (KEH-8100QR)	CEL1025	44	.....	
18	Bush	CNV-724	45	.....	
19	.....		46	Shaft	
20	IC	BX-1393	47	Button	CAC2211
21	Lamp	CEL1115	48	Button	CAC2212
22	Housing	CNV2251	49	Button	CAC2213
23	Lens	CNV2249	50	Button	CAC2214
24	Plate		51	Button	CAC2215
25	LCD	CAW1070	52	Button	CAC2216
26	Insulator		53	Button	CAC1997
27	Holder		54	Antenna Jack	CKX1010
			55	Insulator	
			56	FM Front End	CWB1035
			57	Plug (21P) (KEH-8100SDK)	
				Plug (20P) (KEH-8100B, 8101B, KEH-8100QR)	

Mark No.	Description	Part No.
58	Holder	
59	Holder	
● 60	FM/AM Tuner Unit (KEH-8100SK)	CWE1166
	FM/AM Tuner Unit (KEH-8100B)	CWE1167
	FM/AM Tuner Unit (KEH-8101B)	CWE1182
	FM/AM Tuner Unit (KEH-8100QR)	CWE1169
● 61	Tuner Amp Unit (KEH-8100SK)	CWM2056
	Tuner Amp Unit (KEH-8100B)	CWM2057
	Tuner Amp Unit (KEH-8101B)	CWM2060
	Tuner Amp Unit (KEH-8100QR)	CWM2061
62	.....	
63	.....	
64	Screw	BMZ30P120FMC
65	Heat Sink (KEH-8100SDK, 8100B, 8100QR)	
	Heat Sink (KEH-8101B)	
66	IC	TA8215H
67	Holder	
68	Volume	CCS1147
69	Clamper	
70	Connector	
71	Buzzer	CPV1009
72	Plug	
73	Holder	
74	Connector	
75	Connector	CKS1262
76	Connector	CKS1254
77	Clamper	
78	Plug	
79	Cord Assy (KEH-8100SDK, 8100B, 8100QR)	CDE2526
	Cord Assy (KEH-8100QR)	CDE2529
80	Box (KEH-8100SDK, KEH-8100B, 8100QR)	CNB1289
	Box (KEH-8101B)	CNB1331
81	Connector	
82	Connector	

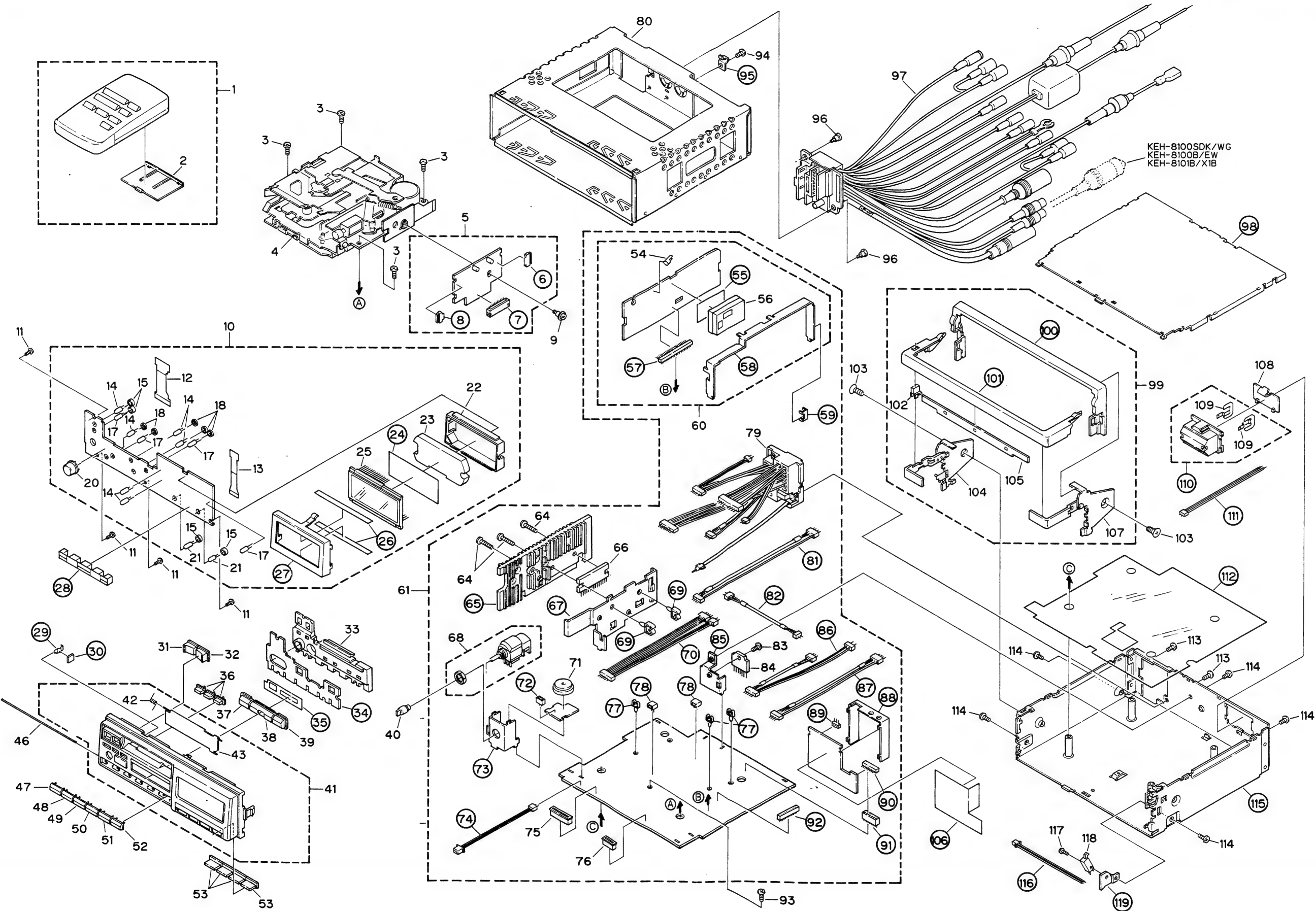
Mark No.	Description	Part No.
83	Screw	BMZ30P060FMC
84	IC	TA8214K
85	Holder	
86	Connector	
87	Connector	
88	Holder	
89	Plug	
90	Connector	
91	Connector	
92	Connector	
93	Screw	BMZ26P040FMC
94	Screw (KEH-8100SDK, KEH-8100B, 8100QR)	BMZ30P050FMC
	Screw (KEH-8101B)	BSZ30P040FMC
95	Clamper	
96	Screw	CBA1073
97	Cord Assy (KEH-8100SDK, 8100B, KEH-8101B)	CDE2527
	Cord Assy (KEH-8100QR)	CDE2536
98	Case (KEH-8100SDK, KEH-8100B, 8100QR)	
	Case (KEH-8101B)	
● 99	Quick Release Handle Assy	CXA3186
100	Panel	
101	Cover	
102	Button	CAC2165
103	Screw	CMZ50P080FMC
104	Handle Unit	CXA3214
105	Handle	CNC3197
106	Insulator (KEH-8100SDK, KEH-8100B, 8100QR)	
	Insulator (KEH-8101B)	
107	Handle Unit	CXA3215
108	Cover	CNS1807
109	Terminal	CKF1015
110	Holder Unit	
111	Connector	
112	Insulator (KEH-8100SDK, KEH-8100B, 8100QR)	
	Insulator (KEH-8101B)	
113	Screw	BMZ30P060FMC
114	Screw	BMZ30P050FMC

Mark No.	Description	Part No.
115	Chassis Unit (KEH-8100SDK)	
	Chassis Unit (KEH-8100B, 8101B)	
	Chassis Unit (KEH-8100QR)	
116	Connector	
117	Screw	CBA-172
118	Switch	CSN-078
119	Holder	

NSP:No Spear Part

	KEH-8100QR/US	KEH-8150QR/ES	KEH-700QR/US	KEH-8150QR/CA
Mark No. Description	Part No.	Part No.	Part No.	Part No.
1 Remote Control Assy	CXA3283	CXA3281	CXA3284	CXA3283
● 4 Cassette Mechanism Assy	EXK1410	EXK1410	EXK1420	EXK1420
● 5 Mechanism Control Unit	CWM1967	CWM1967	CWM1968	CWM1968
41 Grille Unit	CXA3031	CXA3033	CXA3032	CXA3171
43 Door	CAT1272	CAT1223	CAT1270	CAT1272
● 60 FM/AM Tuner Unit	CWE1169	CWE1168	CWE1169	CWE1169
● 61 Tuner Amp Unit	CWM2061	CWM2058	CWM2059	CWM2059
86 Connector (5P)	NSP	NSP	.....	.....
Connector (6P)	.....	.....	NSP	NSP
90 Connector (8P)	NSP	NSP	.....	.....
Connector (9P)	.....	.....	NSP	NSP
91 Connector (8P)	NSP	NSP	.....	.....
Connector (9P)	.....	.....	NSP	NSP

● Exploded View



A A

B B

C C

D D

Fig. 29



## 21. CASSETTE MECHANISM ASSY EXPLODED VIEW

## ● Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Lever	ENV1124	36	Washer	CBF1038
2	Arm Unit	EXA1081	37	Gear	ENV1115
3	Spring	EBH1152	38	Lever Unit	EXA1074
4	Cassette Holder	ENC1165	39	Gear	ENV1107
5	Roller	ELA1148	40	Roller	ELA1146
6	Washer	CBF1037	41	Head Base Unit	EXA1071
7	Screw	BMZ20P030FMC	42	Roller	ELA1147
8	Cover		43	Spring	EBH1131
9	Screw	EBA1016	44	Arm	ENV1121
10	Spring	EBL1011	45	Lever Unit	
11	Spacer	ENV1105	46	Spring	EBH1153
12	Screw	BMZ20P025FMC	47	Washer	YE20FUC
13	Spring	EBH1145	48	Arm	
14	Washer	EBE1005	49	Pinch Roller Unit	EXA1072
15	Screw	HBA-175	50	Spring	EBH1133
16	Head Unit (KEH-8100SDK, 8100B, KEH-8101B, 8100QR, KEH-8150QR/ES) Head Unit (KEH-700QR, 8150QR/CA)	EXA1084    EXA1087	51	Lever	
17	Arm		52	Screw	CBA1076
18	Arm		53	P.C. Board	
19	Spring	EBH1143	54	Switch	CSN1005
20	Lever Unit		55	Screw	CBA1070
21	Arm		56	Spring	EBH1147
22	Washer	YE15FUC	57	Lever	
23	Spring	EBH1154	58	Screw	PMS20P025FMC
24	Arm Unit		59	Motor Unit	EXA1089
25	Spring	EBH1138	60	Lever	
26	Arm	ENV1122	61	Spring	EBH1149
27	Spring	EBH1142	62	Lever	
28	Pinch Roller Unit	EXA1073	63	Gear	ENV1106
29	Spring	EBH1134	64	Chassis Unit	
30	Arm		65	Arm Unit	EXA1082
31	Spring	EBH1144	66	Arm	
32	Arm		67	Spring	EBH1146
33	Collar	ENV1117	68	Clamper	
34	Spring	EBH1155	69	Solenoid	EXP1004
35	Gear	ENV1116	70	Spring	EBH1157
			71	Spring	EBH1151
			72	Spring	EBH1148
			73	Spring	EBH1135
			74	Gear	ENV1118
			75	Guide Unit	

Mark No.	Description	Part No.	Mark No.	Description	Part No.
76	Screw	PMS20P022FUC	96	Gear	ENV1108
77	Bracket		97	Collar	ELA1151
78	P.C. Board		98	Arm Unit	
79	Arm		99	Spring	EBH1141
80	Spring	EBH1158	100	Gear	ENV1114
81	Clamper		101	Arm	
82	Roller	ELA1149	102	Spring	EBH1140
83	Gear	ENV1111	103	Flywheel	ENV1127
84	Solenoid	EXP1003	104	Flywheel	ENV1128
85	Gear	ENV1109	105	Spring	EBH1169
86	Collar	ELA1152	106	Arm	ENV1130
87	Gear	ENV1110	107	Collar	ELA1155
88	Arm		108	Screw	HBA-183
89	Spring	EBH1136	109	E Type Washer	CBG1003
90	Arm		110	Washer	HBF-179
91	Lever		111	Belt	ENT1011
92	Spring	EBH1137	112	Cover	
93	Gear	ENV1112	113	Lever	
94	Gear Unit	EXA1083	114	Arm Unit	
95	Gear	ENV1113	115	Spring	EBH1139

● Cassette Mechanism Assy

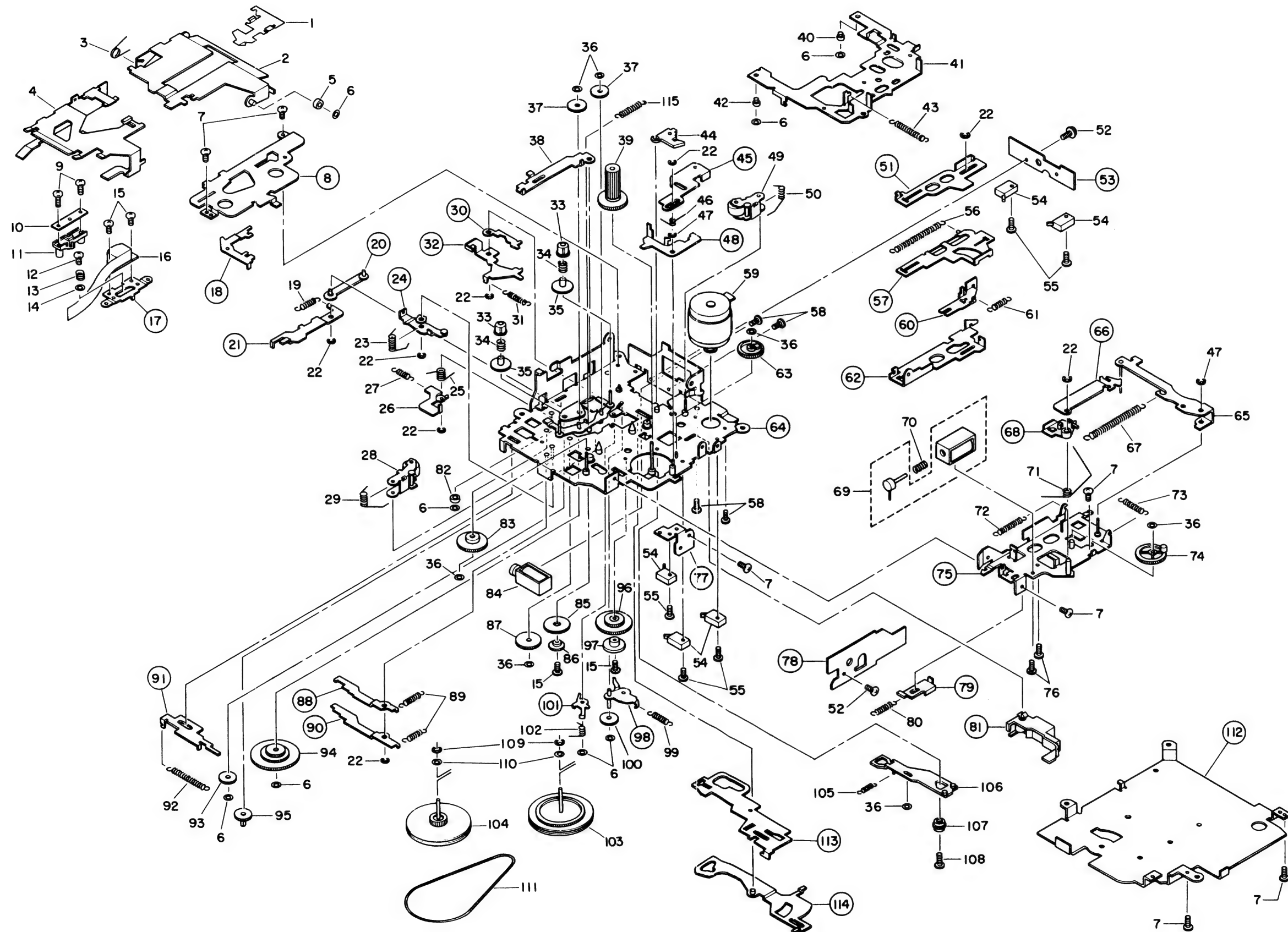


Fig. 30

## 22. PACKING METHOD

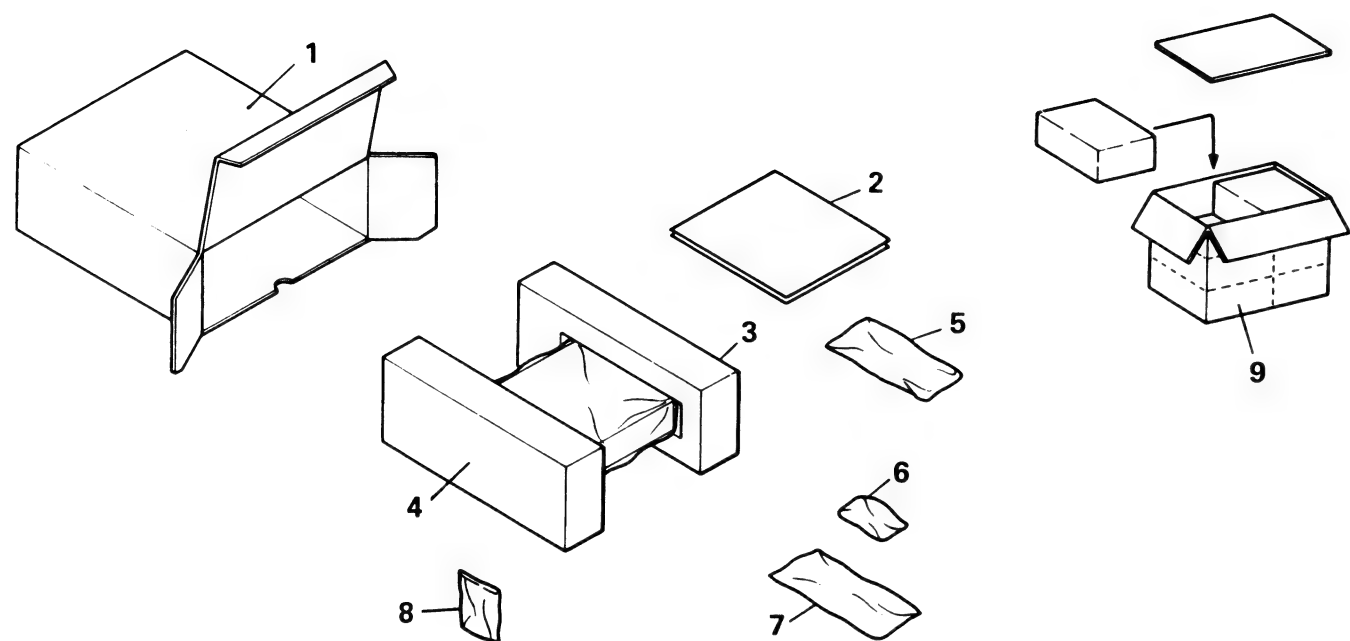


Fig. 31

### ● Parts List

NSP: No Spare Part

			KEH-8100 SDK/WG	KEH-8100B/ EW	KEH-8101B /X1B	KEH-8150QR /ES	KEH-8100QR /US	KEH-700QR /US	KEH-8150QR /CA
Mark	No.	Description	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
*	1	Carton	CHG1683	CHG1684	CHG1719	CHG1681	CHG1680	CHG1679	CHG1682
	2-1	Owner's Manual	CRD1316	CRD1317 CRD1318	CRD1338	CRD1319	CRB1139	CRB1138	CRD1320
	2-2	Caution Card	NSP	.....	.....	.....	.....	.....	.....
	2-3	Caution Card	NSP	NSP	NSP	NSP	NSP	NSP	NSP
	2-4	Card	NSP	NSP	.....	.....	.....	.....	.....
	2-5	Passport	NSP	.....	.....	.....	.....	.....	.....
	2-6	Card	.....	.....	NSP	.....	.....	.....	.....
	2-7	Card	.....	.....	.....	.....	NSP	NSP	NSP
	3	Styrofoam	CHP1254	CHP1254	CHP1262	CHP1254	CHP1254	CHP1254	CHP1254
*	4	Styrofoam	CHP1253	CHP1253	CHP1261	CHP1253	CHP1253	CHP1253	CHP1253
	5	Accessory Assy	CEA1471	CEA1471	CEA1488	CEA1472	CEA1471	CEA1471	CEA1471
	6	Remote Control Assy	.....	CXA3281	CXA3281	CXA3281	CXA3283	CXA3284	CXA3283
	7-1	Cord Assy	.....	.....	.....	CDE2536	.....	.....	.....
	7-2	Clamper	.....	.....	.....	NSP	.....	.....	.....
	7-3	Screw	.....	.....	.....	BMZ30P 050FMC	.....	.....	.....
*	8	Accessory Assy	.....	CEA1473	CEA1489	CEA1492	CEA1492	CEA1492	CEA1492
	9	Contain Box	.....	.....	.....	.....	CHL1680	CHL1679	.....

\* 2-1 Owner's Manual

Part No.	Model	Language
CRD1316	KEH-8100SDK/WG	German, French
CRD1317 CRD1318	KEH-8100B/EW KEH-8100B/EW	English, French, German, Spanish Swedish, Norwegian, Dutch, Finnish
CRD1338	KEH-8101B/X1B	English, French, Italian
CRD1319	KEH-8150QR/ES	English, French, Spanish, Arabic
CRB1139	KEH-8100QR/US	English
CRB1138	KEH-700QR/US	English
CRD1320	KEH-8150QR/CA	English, French

KEH-8100SDK/WG, KEH-8100B/EW, KEH-8100QR/US,  
KEH-700QR/US, KEH-8150QR/CA

KEH-8101B/X1B

* 5 Accessory Assy CEA1471		
Mark No.	Description	Part No.
5-1	Screw (× 1)	CBA-102
5-2	Screw (× 1)	CBA1002
5-3	Strap	CNF-111
5-4	Bush	CNV1009
5-5	Nut (× 2)	NF50FMC

* 5 Accessory Assy CEA1488		
Mark No.	Description	Part No.
5-1	Screw (× 1)	CBA-102
5-2	Screw (× 1)	CBA1002
5-3	Bracket	CNF-975
5-4	Bush	CNV1009
5-5	Nut (× 2)	NF50FMC

KEH-8150QR/ES

* 5 Accessory Assy CEA1472					
Mark No.	Description	Part No.	Mark No.	Description	Part No.
5-1	Screw Assy		5-3	Strap	CNF-111
5-1-1	Screw (× 1)	PMZ26P030FZK	5-4	Bush	CNV1009
5-1-2	Screw (× 4)	BMZ50P080FMC			
5-1-3	Screw (× 1)	CBA-102			
5-1-4	Screw (× 1)	CBA1002			
5-1-5	Screw (× 2)	CBA1073			
5-1-6	Nut (× 2)	NF50FMC			
5-2	Accessory Assy	CEA1481			
5-2-1	Escutcheon				
5-2-2	Escutcheon				

## KEH-8100B/EW

* 8 Accessory Assy      CEA1473		
Mark No.	Description	Part No.
8-1	Battery	CEX1006
8-2	Fastener (Rough Surface)	CNM1716
8-3	Fastener (Soft Surface)	CNM1717

## KEH-8101B/X1B

* 8 Accessory Assy      CEA1489		
Mark No.	Description	Part No.
8-1	Battery	CEX1006
8-2	Fastener (Rough Surface)	CNM1841
8-3	Fastener (Soft Surface)	CNM1842

KEH-8150QR/ES, KEH-8100QR/US, KEH-700QR/US,  
KEH-8150QR/CA

* 8 Accessory Assy      CEA1492		
Mark No.	Description	Part No.
8-1	Battery	CEX1006
8-2	Battery	CEX1010
8-3	Fastener (Rough Surface)	CNM1716
8-4	Fastener (Soft Surface)	CNM1717



## 23. ELECTRICAL PARTS LIST

**NOTE:**

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

### Chip Resistor

RS1/8S ☐ ☐ ☐ J. RS1/10S ☐ ☐ ☐ J.

Chip Capacitor (except for CQS.....)

CKS..... CCS..... CSZS.....

Tuner Amp Unit
Consists of
• Tuner Amp P. C. Board
• Dolby NR P. C. Board
• PEE P. C. Board
• FM/AM Tuner Unit

Unit Number :

Unit Name : Tuner Amp Unit (KEH-8100SDK, KEH-8100B, KEH-8101B)

## MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.	Mark	Circuit Symbol & No.	Part Name	Part No.
IC 301		HA12134	D 753 754 755				ERA15-02VH
IC 451		TC9188W	D 756				HZS6LC2
IC 452 453 454		UPC4570G	D 759				HZS6R8J81
IC 501		LC7218	D 801				MTZ9R1JC
IC 502 (KEH-8100SDK)		KHA142	D 802 805 808 810 811				1SS270
IC 551		TA8215H	D 804				1S1555
IC 601		TA75558P	D 809				HZS5R6J82
IC 701		PD4229	D 820				ERC04-02FE3
IC 702		S-8053ANO	L 501		Ferri-Inductor		LAU2R2M
IC 703		TA8214K	L 701		Ferri-Inductor		LAU101K
Q 301 302 603 605 606 607 608 611 855 856		DTC314TS	L 801 802 803				CCG1003
Q 303 503 506 604 702 704 706 707 752		DTC124ES	1B 701				CWW1274
Q 501		2SC2498	1B 702				CWW1276
Q 502 761 766		2SD1859	1B 703 704 705				CWW1048
Q 504		2SK330	X 501		Crystal Resonator		CSS1030
Q 505 507 510 601 602		2SC2458	X 502 (KEH-8100SDK)		Ceramic Resonator		CSS1019
Q 508 (KEH-8100SDK)		2SC2458	X 701		Crystal Resonator		CSS1023
Q 509		2SC3113	X 702		Buzzer		CPV1009
Q 551 552		DTC343TS	VR 301 302		Semi-fixed 33kΩ (B)		CCP-381
Q 701 703 705 751 857		DTA124ES	VR 451		Volume 200Ω, 200Ω (M)		CSS1147
Q 750 756		DTC114TS			FM/AM Tuner Unit (KEH-8100SDK)		
Q 755 757 762		2SB1243			FM/AM Tuner Unit (KEH-8100B)		
Q 758		DTC114ES			FM/AM Tuner Unit (KEH-8101B)		
Q 759 764		DTC144TS					
Q 763 801 803		DTC124ES					
			RESISTORS				
Q 802		2SA1048					
Q 851 852		2SC2458					
Q 853 854		2SA1048					
D 501		HZS6R2J82	R 301				RD1/4PS183JL
D 502		HZS3R0E82	R 302 309				RD1/4PS223JL
			R 303 304 310				RD1/4PS103JL
D 503 504 505 601 604 605 606 607 610		1SS270	R 305 306				RD1/4PS222JL
D 608		MTZ4R7JB	R 307 308				RD1/4PS563JL
D 701 702 703 704 705 706		1SS270					
D 710 (KEH-8100SDK)		1SS270	R 311				RS1/10S473J
D 751 752		HZS7LC2	R 451 453 454				RS1/10S224J
			R 452				RS1/8S224J
			R 455 456				RS1/10S334J
			R 457 458				RS1/10S123J

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.	Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
R	462	463	464	465	466	467					
R	471	472									
R	501	526	729	735							
R	502	503	504	701	715	737					
R	505	509									
R	506	709	710								
R	507										
R	508	521	527	530	531						
R	510										
R	511	825									
R	512										
R	513	514									
R	515										
R	516										
R	518										
R	519										
R	520										
R	522	541	718	719	720	721	722	723	727		
R	523	726									
R	524	731	732	733	734						
R	525										
R	528										
R	529	704									
R	533	534									
R	535	(KEH-8100SDK)									
R	537	(KEH-8100SDK)									
R	538	(KEH-8100SDK)									
R	539	540									
R	542										
R	551	552	859	860							
R	553	555	556								
R	554										
R	557	622	631	742	744	746	749	750	778		
R	558	571	613	621	626	629	632				
R	561	562									
R	563										
R	564										
R	570	605	606	607	608	714					
R	601	602									
R	603	604									
R	609	610	869	870							
R	611	612	617	618							
R	623	624	627	628							
R	630	802									
R	633										
R	634										
R	651	652	653	743	818	819	820	822	824		
R	654										
R	702										
R	705	706	707	708							

Mark =====	Circuit Symbol & No.	==== Part Name	Part No.	Mark =====	Circuit Symbol & No.	==== Part Name	Part No.
C 552 851 852 853 854			CEA4R7M35LS	C 610 612			CEA2R2M50LS2
C 555 556			CEHAQ470M25	C 611			CKSYF105225
C 557 558 559 560			CQEA224J63	C 615 708 716 802 807 809 810			CKSQYF104225
C 560			CEA472M16L2	C 702			CCSQCH330J50
C 561			CEHAQ101M10	C 703			CCSQCH090D50
C 601 602 603 604			CEA2R2M50LS2	C 704			CEA2R2M50LS2
C 605 606			CCSQCH270J50	C 754			CKSYF104225
C 607			CEA221M10L2	C 756 758			CEA330M10LS
C 608 709			CEA470M16L2	C 799	3300 μ F/16V		CCH1037
C 609 710 717	470 μ F/10V		CCH1019	C 804 808			CEA220M16LS
				C 805 806			CEA100M16LS2
				C 855 856 859			CKSQYB102K50

Tuner Amp Unit	KEH-8100B/EW	KEH-8150QR/ES	KEH-8100QR/US	KEH-7000R/US KEH-8150QR/CA
Symbol & No.	Part No.	Part No.	Part No.	Part No.
FM/AM Tuner Unit	Marked by Ⓢ	.....	.....	.....
FM/AM Tuner Unit	.....	Marked by Ⓢ	.....	.....
FM/AM Tuner Unit	.....	.....	Marked by Ⓢ	Marked by Ⓢ
IC301	HA12134	HA12134	HA12134	.....
IC351	.....	.....	.....	BH-2405
Q301, 302	DTC314TS	DTC314TS	DTC314TS	.....
Q303	DTC124ES	DTC124ES	DTC124ES	.....
Q351, 352	.....	.....	.....	DTC124ES
Q353, 354	.....	.....	.....	DTC314TS
Q355, 356	.....	.....	.....	DTC124ES
Q503	DTC124ES	.....	.....	.....
Q708	.....	.....	DTA144ES	DTA144ES
D707	.....	1SS270	.....	.....
D709	.....	.....	1SS270	1SS270
D711	.....	.....	.....	1SS270
D803, 815	.....	.....	1SS270	1SS270
L351, 352	.....	.....	.....	CTF1019
VR301, 302	CCP-381	CCP-381	CCP-381	.....
VR351, 352	.....	.....	.....	CCP-381
R301	RD1/4PS183JL	RD1/4PS183JL	RD1/4PS183JL	.....
R302, 309	RD1/4PS223JL	RD1/4PS223JL	RD1/4PS223JL	.....
R303, 304, 310	RD1/4PS103JL	RD1/4PS103JL	RD1/4PS103JL	.....
R305, 306	RD1/4PS222JL	RD1/4PS222JL	RD1/4PS222JL	.....
R307, 308	RD1/4PS563JL	RD1/4PS563JL	RD1/4PS563JL	.....
R312	.....	.....	.....	RS1/10S473J
R351	.....	.....	.....	RS1/10S822J
R352, 357	.....	.....	.....	RS1/8S0R0J
R353, 359	.....	.....	.....	RS1/10S222J
R354	.....	.....	.....	RS1/8S822J
R355	.....	.....	.....	RS1/8S563J
R356, 358	.....	.....	.....	RS1/10S0R0J
R360	.....	.....	.....	RS1/10S563J
R361, 362	.....	.....	.....	RS1/10S123J
R363	.....	.....	.....	RS1/10S103J
R364	.....	.....	.....	RS1/8S103J
R365	.....	.....	.....	RS1/8S473J
R522	RD1/4PS222JL	.....	.....	.....
R523	RS1/10S222J	RS1/10S472J	RS1/10S472J	RS1/10S472J

Tuner Amp Unit	KEH-8100B/EW	KEH-8150QR/ES	KEH-8100QR/US	KEH-700QR/US KEH-8150QR/CA
Symbol & No.	Part No.	Part No.	Part No.	Part No.
R551, 552, 859, 860	RS1/10S431J	RS1/10S471J	RS1/10S471J	RS1/10S471J
R716	.....	RD1/4PS102JL	RD1/4PS102JL	RD1/4PS102JL
R717	.....	.....	.....	RD1/4PS102JL
R728	.....	.....	RD1/4PS122JL	RD1/4PS122JL
R747	.....	.....	.....	RS1/10S0R0J
R770	.....	RS1/8S0R0J	RS1/8S0R0J	RS1/8S0R0J
R803, 804	.....	.....	RS1/10S0R0J	RS1/10S0R0J
R805	.....	.....	RS1/10S103J	RS1/10S103J
R822	RS1/10S0R0J	.....	.....	.....
R823	.....	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J
R853, 854	RS1/10S683J	RS1/10S473J	RS1/10S473J	RS1/10S473J
R861, 862	RS1/10S823J	RS1/10S163J	RS1/10S163J	RS1/10S163J
R863, 864	RS1/10S154J	RS1/10S473J	RS1/10S473J	RS1/10S473J
R865, 866	RS1/10S222J	RS1/10S271J	RS1/10S271J	RS1/10S271J
R867, 868	RS1/10S102J	RS1/10S821J	RS1/10S821J	RS1/10S821J
R869, 870	RS1/10S223J	RS1/10S473J	RS1/10S473J	RS1/10S473J
R871, 872	RS1/10S392J	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J
R873	RS1/10S102J	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J
C301, 302, 310	CEA010M50LS2	CEA010M50LS2	CEA010M50LS2	.....
C303, 304	CEAR33M50LS2	CEAR33M50LS2	CEAR33M50LS2	.....
C306, 312	CEAR22M50LS2	CEAR22M50LS2	CEAR22M50LS2	.....
C307, 308	CEA100M16LS2	CEA100M16LS2	CEA100M16LS2	.....
C309	CEA101M10LS	CEA101M10LS	CEA101M10LS	.....
C311	CEA220M10LS	CEA220M10LS	CEA220M10LS	.....
C351, 352, 355, 356	.....	.....	.....	CEA4R7M35LS
C353, 354	.....	.....	.....	CEA010M50LS2
C357, 358	.....	.....	.....	CEA101M10LS
C359	.....	.....	.....	CEA220M10LS
C513	CEAR47M50L2	.....	.....	.....
C859	CKSQYB102K50	.....	.....	.....

Unit Number :

Unit Name : FM/AM Tuner Unit (KEH-8100SDK/WG)

## MISCELLANEOUS

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.	Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
IC 51					PA4012	T 201		Coil			CTB1020
IC 201					PA4010	T 202		Coil			CTB1004
Q 1		Chip Transistor			2SA1162	T 203		Coil			CTB1040
Q 2 203 205		Chip Transistor			DTC124EK	T 204		Coil			CTE1037
Q 51		Chip Transistor			DTA114TK	T 205		Coil			CTE1038
Q 101		Chip Transistor			2SC4116	T 206		Coil			CTE1039
Q 201					2SK435	CG 1		Surge Protector			DSP-201M
Q 202		Chip Transistor			2SC2712	TH 51 102		Thermister			DTN-T204D154K
D 201 204		Chip Diode			MA157-MR	CF 51 52		Ceramic Filter			CTF-182
D 205		Variable Capacitance Diode			SVC203-AB	CF 201		Ceramic Filter			CTF1041
L 1 51		Inductor			CTF1104	CF 202		Filter			CTF1085
L 2		Inductor			CTF1086	X 151		Ceramic Resonator			CSS1055
L 101		Inductor			CTF1126	X 201		Crystal Resonator			CSS1014
L 201		Inductor			CTF1084	VR 1		Semi-fixed 10kΩ (B)			VRTB4VS103
L 203		Ferri-Inductor			LAU220K	VR 51 101 102		Semi-fixed 33kΩ (B)			VRTB4VS333
L 204		Ferri-Inductor			LAU470K			FM Front End			CWB1035
L 205		Ferri-Inductor			LAU4R7K						
L 206		Ferri-Inductor			CTF-157						
T 51		Coil			CTE1021						
T 52		Coil			CTE1022						

RESISTORS

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.	Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
R	2 7 106		RS1/10S223J	C	203 215 216 219 226		CKSQYF473Z25
R	3		RS1/10S124J	C	204 208 210		CKSQYB223K25
R	4		RS1/10S682J	C	205		CCSQCH220J50
R	5 13 63		RS1/10S0R0J	C	206 207		CCSQCH820J50
R	6 59 101		RS1/10S331J	C	211		CEA2R2M50LL
R	10		RS1/10S560J	C	213		CCSQCH390J50
R	54		RS1/10S472J	C	218		CEA2R2M35NPLL
R	56 58 104		RS1/10S393J	C	220		CCSQCH430J50
R	57		RS1/10S562J	C	221		CCSQCH100D50
R	60		RS1/10S473J	C	222		CSZA010K35L
R	61 105		RS1/10S332J	C	224		CEA470M16LL
R	64		RS1/10S222J	C	225		CKSQYB333K25
R	102		RS1/10S822J	C	227		CEA4R7M35LS
R	107		RS1/10S102J	C	229		CEA470M16LS
R	108		RS1/10S104J	C	230		CEA220M16LL
R	111		RS1/10S123J				
R	112		RS1/10S394J				
R	151 152 153		RS1/10S222J				
R	201		RS1/10S220J				
R	202		RS1/10S681J				
R	203 206 214		RS1/10S222J				
R	204 213		RS1/10S473J				
R	205 209		RS1/10S470J				
R	207		RS1/10S822J				
R	208 211 212		RS1/10S103J				
R	210		RS1/10S682J				
R	215		RS1/10S153J				

CAPACITORS

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
C	1		CKSQYB102K50
C	2 3 104		CKSQYB103K50
C	4 51 59		CKSQYF473Z25
C	52 53		CKSQYB223K25
C	54		CCSQL101J50
C	55		CKSQYB102K50
C	56		CKSQYF104Z25
C	57		CEAR47M50LS2
C	58		CCSQCH060D50
C	60		CEALNP100M6R3
C	101		CKSQYB822K50
C	102		CKSQYB682K50
C	103		CKSQYB392K50
C	105		CEA2R2M50LL
C	106		CEA220M6R3LL
C	107 108		CKSQYB222K50
C	110		CEA010M50LL
C	111		CEA100M16LL
C	112		CEA0R1M50LL
C	151 152		CKSQYB273K25
C	153		CSZAR47M35L
C	154 155 156		CEA3R3M50LL
C	157		CEA101M10LS
C	201 223 228		CKSQYB103K25
C	202 212		CKSQYB332K50



FM/AM Tuner Unit	KEH-8100SDK	KEH-8100B/EW	KEH-8150QR/ES	KEH-8100QR/US KEH-700QR/US KEH-8150QR/CA
Symbol & No.	Part No.	Part No.	Part No.	Part No.
Q3	.....	.....	.....	2SA1162
Q51	DTA114TK	.....	.....	.....
D11, 12	.....	.....	.....	1SV128A-BB
L2	CTF1086	CTF1086	.....	.....
L11, 12	.....	.....	.....	CTF1065
L201	CTF1084	CTF1084	CTF1026	CTF1026
VR1	VRTB4VS103	VRTB4VS103	VRTB4VS103	VRTB4VS104
R3	RS1/10S124J	RS1/10S124J	RS1/10S124J	RS1/10S683J
R8	.....	.....	.....	RS1/10S331J
R9	.....	.....	.....	RS1/10S223J
R10	RS1/10S560J	RS1/10S560J	RS1/10S0R0J	RS1/10S0R0J
R11	.....	.....	.....	RS1/10S104J
R12	.....	.....	.....	RS1/10S470J
R13	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J	.....
R14	.....	.....	RS1/10S0R0J	RS1/10S0R0J
R58	RS1/10S393J	RS1/10S393J	RS1/10S393J	RS1/10S223J
R60	RS1/10S473J	.....	.....	.....
R61	RS1/10S332J	RS1/10S332J	.....	.....
R101	RS1/10S331J	RS1/10S331J	RS1/10S471J	RS1/10S471J
R151, 152	RS1/10S222J	RS1/10S222J	RS1/10S152J	RS1/10S152J
C11-14	.....	.....	.....	CCSQCH220J50
C15	.....	.....	.....	CKSQYF223Z50
C57	CEAR47M50LS2	CEAR47M50LS2	CEAR47M50LS2	CEAR68M50LS2
C101	CKSQYB822K50	CKSQYB822K50	CKSQYB832K50	CKSQYB392K50
C151, 152	CKSQYB273K25	CKSQYB273K25	CKSQYB333K25	CKSQYB563K25

Unit Number :

Unit Name : Key Board Unit(KEH-8100SDK, 8100B, 8101B)

## MISCELLANEOUS

Mark ===== Circuit Symbol &amp; No. ===== Part Name Part No.

IC 901		LC7582A
IC 902		BX-1393
Q 901 902 903 904	Chip Transistor	DTB123EX
Q 905	Chip Transistor	DTC114TK
IL 901 902	Lamp 14V 40mA	CEL1115
IL 903 904 905 906 907 908	Lamp 14V 40mA	CEL-147
IL 909 910 911 912	Lamp 14V 40mA	CEL1013
S 1 2 3 4 5 6 7 8 9 10	Switch	CSG-255
S 11 12 13 14 15 16 17 18 19	Switch	CSG-255
	LCD	CAW1070

	KEH-8100SDK KEH-8100B KEH-8101B	KEH-1150QR/ES, CA KEH-1100QR KEH-1100QR
Key Board Unit		
Symbol & No.	Part No.	Part No.
IL909-912 Lamp 14V 40mA	CEL1013	CEL1125

Unit Number :

Unit Name : Mechanism Control Unit  
(KEH-8100SDK, 8100B, 8101B, 8100QR, 8150QR/ES)

## RESISTORS

Mark ===== Circuit Symbol &amp; No. ===== Part Name Part No.

R 901 902 903 904	RS1/10S102J
R 905	RS1/10S104J
R 906	RS1/10S470J

## CAPACITORS

Mark ===== Circuit Symbol &amp; No. ===== Part Name Part No.

C 901	CKSQYB473K25
C 902	CKSQYB331K50
C 903	CEA470M6R3LS

## MISCELLANEOUS

Mark ===== Circuit Symbol &amp; No. ===== Part Name Part No.

IC 1		8A3430FS
Q 1	Chip Transistor	2SC4116
Q 2	Chip Transistor	DTC143ZU
Q 3	Chip Transistor	DTBL132P
Q 4 6	Chip Transistor	2SC3295
Q 5 7	Chip Transistor	2SB1441JU

## RESISTORS

## Miscellaneous Parts List

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
R	1	2 3 4			RS1/10S104J
R	5	6 13			RS1/10S181J
R	7	8			RS1/10S334J
R	9	10			RS1/10S133J
R	11	12			RS1/10S183J
R	14				RS1/10S270J
R	15				RS1/10S823J
R	16	21 26			RS1/10S473J
R	17				RS1/10S333J
R	18	19			RS1/10S224J
R	20	24 25 29			RS1/10S103J
R	22	23 27 28			RS1/8S221J

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
S	1			Switch (Handle)	CSN-078
HD	1	(KEH-8100SDK, 8100B, 8101B, 8100QR, 8150QR/ES)		Head Unit	EXA1084
HD	1	(KEH-700QR, 8150QR/CA)		Head Unit	EXA1087
M	1			Motor Unit	EXA1089
SO	1			Solenoid	EXP1003
SO	2			Solenoid	EXP1004

## CAPACITORS

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
C	1	2 3 4			CKSQYB391K50
C	5	6	22 $\mu$ F/6.3V		CCH1065
C	7	8 14			CKSQYB103K50
C	9				CKSQYB152K50
C	10	12			CKSYB104K25
C	11		6.8 $\mu$ F/25V		CCH1066
C	13		100 $\mu$ F/6.3V		CCH1067
C	15	16	4.7 $\mu$ F/25V		CCH1064

Mechanism Control Unit	KEH-8100SDK KEH-8100B KEH-8101B KEH-8100QR KEH-8150QR/ES	KEH-700QR KEH-8150QR/CA
Symbol & No.	Part No.	Part No.
R1-4	RS1/10S104J	RS1/10S153J

Unit Number :

Unit Name : Connector P.C. Board

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
D	1	2			F1SR35-100A
S	1	2 3	Switch (LOAD, END, F/R)		CSN1005

Unit Number :

Unit Name : Switch P.C. Board.

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
S	1	2	Switch (METAL, PLAY)		CSN1005